



## SEQUENCE LISTING

Q1  
<110> Lawn, Richard M.  
Wade, David  
Garvin, Michael

<120> Compositions and Methods for Increasing Cholesterol  
Efflux and Raising HDL using ATP Binding Cassette  
Transporter Protein ABC1

<130> 99,395-B

<140> 09/596,141

<141> 2000-06-16

<150> US 60/140,264

<151> 1999-06-18

<150> US 60/153,872

<151> 1999-09-14

<150> US 60/166,573

<151> 1999-11-19

<160> 57

<170> PatentIn Ver. 2.0

<210> 1

<211> 10442

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> (1) .. (10442)

<223> All n's are unknown.

<400> 1

ggccgggacc cgcagagccg agccgaccct tctctcccgg gctgcggcag ggcagggcgg 60  
ggagctccgc gcaccaacag agccggttct cagggcgctt tgctccttgt ttttccccg 120  
gttctgtttt ctccccttct ccggaaggct tgtcaagggg taggagaaag agacgcaaac 180  
acaaaagtgg aaaacagtta atgaccagcc acgggcgtcc ctgctgtgag ctctggccgc 240  
tgccttcag ggctcccag ccacacgctg ggctgtgctg ctgagggaac atggcttgtt 300  
ggcctcagct gaggttgctg ctgtggaaga acctacttt cagaagaaga caaacatgtc 360  
agctgttact ggaagtggcc tggcctctat ttatcttct gatcctgatc tctgttcggc 420  
tgagctaccc acctatgaa caacatgaat gccattttcc aaataaagcc atgccctctg 480  
caggaacact tccttgggtt caggggatta tctgtaatgc caacaaccc tgtttccgtt 540

Cancel page 1 to page 55  
and substitute pages  
1-48 of B7

accggaactcc tggggaggct cccggagttg ttggaaactt taacaaatcc attgtggctc 600  
 gcctgtttctc agatgctcgg aggtttcttt tatacagcca gaaagacacc agcatgaagg 660  
 acatgcgcaa agttctgaga acattacagc agatcaagaa atccagctca aacttgaagc 720  
 ttcaagattt cctggtggac aatgaaacct tctctgggtt cctatatcac aacctctctc 780  
 tcccaaagtc tactgtggac aagatgctga gggctgatgt cattctccac aaggatattt 840  
 tgcaaggcta ccagttacat ttgacaagtc tgtgcaatgg atcaaaatca gaagagatga 900  
 ttcaacttgg tgaccaagaa gtttctgagc tttgtggcct accaaaggag aaactggctg 960  
 cagcagagcg agtactctgt tccaacatgg acatcctgaa gccaatcctg agaacactaa 1020  
 actctacatc tcccttcccg agcaaggagc tggctgaagc cacaaaaaca ttgctgcata 1080  
 gtcttgggac tctggcccag gagctgttca gcatgagaag ctggagtgc atgacgacagg 1140  
 aggtgatgtt tctgaccaat gtgaacagct ccagctctc cacccaaate taccaggctg 1200  
 tgtctcgtat tgtctgctgg catcccagg gaggggggct gaagatcaag tctctcaact 1260  
 ggtatgagga caacaactac aaagccctct ttggaggcaa tggcactgag gaagatgctg 1320  
 aaaccttcta tgacaactct acaactcctt actgcaatga tttgatgaag aatttggagt 1380  
 ctagtctctt ttcccgcatt atctggaaag ctctgaagcc gctgctcgtt gggaagatcc 1440  
 tgtatacacc tgacactcca gccacaaggc aggtcatggc tgaggtgaac aagaccttcc 1500  
 aggaactggc tgtgttccat gatctggaag gcatgtggga ggaactcagc cccaagatct 1560  
 ggaccttcat ggagaacagc caagaaatgg acctgtctcg gatgctgttg gacagcaggg 1620  
 acaatgacca cttttgggaa cagcagttgg atggcttaga ttggacagcc caagacatcg 1680  
 tggcgttttt ggccaagcac ccagaggatg tccagtccag taatggttct gtgtacacct 1740  
 ggagagaagc tttcaacgag actaaccagg caatccggac catatctcgc ttcattggagt 1800  
 gtgtcaacct gaacaagcta gaaccatag caacagaagt ctggctcatc aacaagtcca 1860  
 tggagctgct ggatgagagg aagttctggg ctgtattgt gttcactgga attactccag 1920  
 gcagcattga gctgccccat catgtcaagt acaagatccg aatggacatt gacaatgtgg 1980  
 agaggacaaa taaaatcaag gatgggtact gggacctgg tctctgagct gacctcttg 2040  
 aggacatgcg gtacgtctgg gggggcttcg cctacttga ggatgtggtg gagcaggcaa 2100  
 tcatcagggt gctgacgggc accgagaaga aaactggtgt ctatatgcaa cagatgcct 2160  
 atccctgtta cgttgatgac atctttctgc gggatgatgag ccggtcaatg cccctcttca 2220  
 tgacgctggc ctggatttac tcagtggctg tgatcatcaa gggcatcgtg tatgagaagg 2280  
 aggcacggct gaaagagacc atgcggatca tgggcctgga caacagcata ctctggttta 2340  
 gctggttcat tagtagcctc attcctcttc ttgtgagcgc tggcctgcta gtggtcatcc 2400  
 tgaagttagg aaacctgctg ccctacagtg atcccagcgt ggtgtttgtc ttctgtctcg 2460  
 tgtttgctgt ggtgacaatc ctgcagtgtc tctgattag cacactcttc tccagagcca 2520  
 acctggcagc agcctgtggg ggcacatct acttcacgct gtacctgcc tacgtcctgt 2580  
 gtgtggcatg gcaggactac gtgggcttca cactcaagat cttcgctagc ctgctgtctc 2640  
 ctgtggcttt tgggtttggc tgtgagtact ttgcccttt tgaggagcag ggcattggag 2700  
 tgcagtggga caacctgttt gagagtcctg tggaggaaga tggcttcaat ctcaccactt 2760  
 cgatctccat gatgctgttt gacaccttcc tctatggggt gatgacctgg tacattgagg 2820  
 ctgtctttcc aggccagtac ggaattccca ggccctggta ttttcttgc accaagtcct 2880  
 actggtttgg cgaggaaagt gatgagaaga gccacctgg ttccaaccag aagagaatgt 2940  
 cagaaatctg catggaggag gaaccaccc acttgaagct gggcgtgtcc attcagaacc 3000  
 tggtaaaagt ctaccgagat gggatgaagg tggctgtcga tggcctggca ctgaattttt 3060  
 atgagggcca gatcacctcc ttcctgggac acaatggagc ggggaagacg accaccatgt 3120  
 caatcctgac cgggttgctc cccccgacct cgggcaccgc ctacatcctg ggaaaagaca 3180  
 ttcgctctga gatgagcacc atccggcaga acctgggggt ctgtccccag cataacgtgc 3240  
 tgtttgacat gctgactgtc gaagaacaca tctggttcta tgcccgttg aaagggctct 3300  
 ctgagaagca cgtgaaggcg gagatggagc agatggccct ggatgttggt ttgcatcaa 3360  
 gcaagctgaa aagcaaaaca agccagctgt cagggtggaat gcagagaaag ctatctgtgg 3420

Sub  
 B7  
 Cont

ccttggcctt	tgtcggggga	tctaaggttg	tcattctgga	tgaaccaca	gctggtgtgg	3480
acccttactc	ccgcagggga	atatgggagc	tgctgctgaa	ataccgacaa	ggccgcacca	3540
ttattctctc	tacacaccac	atggatgaag	cggacgtcct	gggggacagg	attgccatca	3600
tctcccatgg	gaagctgtgc	tgtgtgggct	cctccctgtt	tctgaagaac	cagctgggaa	3660
caggctacta	cctgaccttg	gtcaagaaa	atgtggaatc	ctccctcagt	tcctgcagaa	3720
acagtagtag	cactgtgtca	tacctgaaaa	aggaggacag	tgtttctcag	agcagttctg	3780
atgctggcct	gggcagcgac	catgagagt	acacgctgac	catcgatgtc	tctgctatct	3840
ccaacctcat	caggaagcat	gtgtctgaag	ccgggctggg	ggaagacata	gggcatgagc	3900
tgacctatgt	gctgccatat	gaagctgcta	aggagggagc	ctttgtggaa	ctctttcatg	3960
agattgatga	ccggctctca	gacctgggca	tttctagtta	tggcatctca	gagacgacct	4020
tggaagaaat	attcctcaag	gtggccgaag	agagtggggg	ggatgctgag	acctcagatg	4080
gtaccttgcc	agcaagacga	aacaggcggg	ccttcgggga	caagcagagc	tgtcttcgcc	4140
cgttactga	agatgatgct	gctgatccaa	atgattctga	catagacca	gaatccagag	4200
agacagactt	gctcagtggg	atggatggca	aagggtccta	ccaggtgaaa	ggctggaaac	4260
ttacacagca	acagtttgtg	gcccttttgt	ggaagagact	gctaattgcc	agacggagtc	4320
ggaaaggatt	ttttgctcag	attgtcttgc	cagctgtgtt	tgtctgcatt	gcccttgtgt	4380
tcagcctgat	cgtgccaccc	tttggaagt	acccagcct	ggaacttcag	ccctggatgt	4440
acaacgaaca	gtacacattt	gtcagcaatg	atgctcctga	ggacacggga	accttggaa	4500
tcttaaagc	cctcaccaa	gacctgggt	tcgggacccg	ctgtatggaa	ggaaaccaa	4560
tcccagacac	gccctgccag	gcaggggagg	aagagtggac	cactgcccc	gttccccaga	4620
ccatcatgga	cctcttcag	aatgggaact	ggacaatgca	gaaccctca	cctgcatgcc	4680
agtgtagcag	cgacaaaatc	aagaagatgc	tgctgtgtg	tccccagg	gcaggggggc	4740
tgccctctcc	acaaagaaaa	caaaacactg	cagatatcct	tcaggacctg	acaggaagaa	4800
acatttcgga	ttatctgggt	aagacgtatg	tgcatcat	agccaaaagc	ttaaagaaca	4860
agatctgggt	gaatgagttt	aggtatggcg	gcttttccct	gggtgtcagt	aatactcaag	4920
cacttctctc	gagtcaagaa	gttaatgatg	ccatcaaaca	aatgaagaaa	cacctaaagc	4980
tggccaagga	cagttctgca	gatcgatttc	tcaacagctt	gggaagattt	atgacaggac	5040
tggacaccag	aaataatgtc	aagggtgtgg	tcaataacaa	gggctggcat	gcaatcagct	5100
ctttcctgaa	tgtcatcaac	aatgccattc	tccgggcca	cctgcaaaag	ggagagaacc	5160
ctagccatta	tggaattact	gctttcaatc	atccccctgaa	tctaccaag	cagcagctct	5220
cagaggtggc	tctgatgacc	acatcagtgg	atgtccttgt	gtccatctgt	gtcatctttg	5280
caatgtcctt	cgtcccagcc	agctttgtcg	tattcctgat	ccaggagcgg	gtcagcaaag	5340
caaaacacct	gcagttcatc	agtggagtga	agcctgtcat	ctactggctc	tctaattttg	5400
tctgggatat	gtgcaattac	gttgtccctg	ccacactggg	cattatcatc	ttcatctgct	5460
tccagcagaa	gtcctatgtg	tctccacca	atctgcctgt	gctagccctt	ctacttttgc	5520
tgtatgggtg	gtcaatcaca	cctctcatgt	accagcctc	ctttgtgttc	aagatcccca	5580
gcacagccta	tgtggtgctc	accagcgtga	acctcttcat	tggcattaat	ggcagcgtgg	5640
ccacctttgt	gctggagctg	ttcacgcaca	ataagctgaa	taatataaat	gatatacctga	5700
agtccgtgtt	cttgatcttc	ccacattttt	gcctgggacg	agggctcatc	gacatgggtga	5760
aaaaccaggc	aatggctgat	gccctggaaa	ggtttgggga	gaatcgcttt	gtgtcaccat	5820
tatcttggga	cttgggtggga	cgaaacctct	tcgccatggc	cgtggaagg	gtggtgttct	5880
tctcattac	tggtctgac	cagtacagat	tcttcatcag	gcccagacct	gtaaatgcaa	5940
agctatctcc	tctgaatgat	gaagatgaag	atgtgaggcg	ggaaagacag	agaattcttg	6000
atggtggagg	ccagaatgac	atcttagaaa	tcaaggagtt	gacgaagata	tatagaagga	6060
agcggaaagc	tgctgttgac	aggatttgcg	tgggcattcc	tcttgggtgag	tgctttgggc	6120
tcttgggagt	taatggggct	ggaaaatcat	caactttcaa	gatgttaaca	ggagatacca	6180
ctgttaccag	aggagatgct	ttccttaaca	aaaatagtat	cttatcaaac	atccatgaag	6240
tacatcagaa	catgggttac	tgccctcagt	ttgatgccat	cacagagctg	ttgactggga	6300

gagaacacgt	ggagttcttt	gcccttttga	gaggagtccc	agagaaagaa	gttggcaagg	6360
ttggtgagtg	ggcgattcgg	aaactgggccc	tcgtgaagta	tggagaaaaa	tatgctggta	6420
actatagtg	aggcaacaaa	cgcaagctct	ctacagccat	ggctttgatc	ggcgggcctc	6480
ctgtggtgtt	tctggatgaa	cccaccacag	gcatggatcc	caaagcccgg	cggttcttgt	6540
ggaattgtgc	cctaagtgtt	gtcaaggagg	ggagatcagt	agtgcctaca	tctcatagta	6600
tggaagaatg	tgaagctctt	tgcactagga	tggcaatcat	ggtcaatgga	aggttcagg	6660
gccttggcag	tgtccagcat	ctaaaaaata	ggtttggaga	tggttataca	atagttgtac	6720
gaatagcagg	gtccaacccg	gacctgaagc	ctgtccagga	tttctttgga	cttgcatctc	6780
ctggaagtgt	tctaaaagag	aaacaccgga	acatgctaca	ataccagctt	ccatcttcat	6840
tatcttctct	ggccaggata	ttcagcatcc	tctcccagag	caaaaagcga	ctccacatag	6900
aagactactc	tgtttctcag	acaacacttg	accaagtatt	tgtgaacttt	gccaaggacc	6960
aaagtgatga	tgaccactta	aaagacctct	cattacacaa	aaaccagaca	gtagtggacg	7020
ttgcagttct	cacatctttt	ctacaggatg	agaaagtgaa	agaaagctat	gtatgaagaa	7080
tctgtttcat	acggggtggc	tgaaagtaaa	gaggaactag	actttccttt	gcaccatgtg	7140
aagtgttgtg	gagaaaagag	ccagaagttg	atgtgggaag	aagtaaactg	gatactgtac	7200
tgatactatt	caatgcaatg	caattcaatg	caatgaaaac	aaaattccat	tacaggggca	7260
gtgcctttgt	agcctatgtc	ttgtatggct	ctcaagtgaa	agacttgaat	ttagtttttt	7320
acctatacct	atgtgaaact	ctattatgga	acccaatgga	catatgggtt	tgaactcaca	7380
cttttttttt	ttttttgttc	ctgtgtattc	tcattggggt	tgcaacaata	attcatcaag	7440
taatcatggc	cagcgattat	tgatcaaaat	caaaaggtaa	tgcacatcct	cattcactaa	7500
gccatgccat	gcccgaggaga	ctggtttccc	ggtgacacat	ccattgctgg	caatgagtgt	7560
gccagagtta	ttagtgccaa	gttttttcaga	aagtttgaag	caccatgggtg	tgtcatgtct	7620
acttttgtga	aagctgctct	gctcagagtc	tatcaacatt	gaatatcagt	tgacagaatg	7680
gtgccatgcg	tggctaacat	cctgctttga	ttccctctga	taagctgttc	tgggtggcagt	7740
aacatgcaac	aaaaatgtgg	gtgtctctag	gcacgggaaa	cttggttcca	ttgttatatt	7800
gtcctatgct	tcgagccatg	ggtctacagg	gtcatcctta	tgagactctt	aaatatactt	7860
agatcctggg	aagaggcaaa	gaatcaacag	ccaaactgct	ggggctgcaa	gctgctgaag	7920
ccagggcatg	ggattaaaga	gattgtgctg	tcaaacctag	ggaagcctgt	gcccatttgt	7980
cctgactgtc	tgctaacatg	gtacactgca	tctcaagatg	tttatctgac	acaagtgtat	8040
tatttctggc	tttttgaatt	aatctagaaa	atgaaaagat	ggagttgtat	tttgacaaaa	8100
atgtttgtac	tttttaattg	tatttggaat	tttaagttct	atcagtgact	tctgaatcct	8160
tagaatggcc	tctttgtaga	accctgtggg	atagaggagt	atggccactg	ccccactatt	8220
tttattttct	tatgtaagtt	tgcatatcag	tcagtactag	tgccatagaa	gcaatgtgat	8280
ggtcaggatc	tcagtacatt	atatttgagt	ttctttcaga	tcatttagga	tactcttaat	8340
ctcacttcat	caatcaaata	ttttttgagt	gtatgctgta	gctgaaagag	tatgtacgta	8400
cgtataagac	tagagagata	ttaaagtctca	gtacacttcc	tgtgccatgt	tattcagctc	8460
actggttttac	aaatataggt	tgtcttgtgg	ttgtaggagc	ccactgtaac	aatattgggc	8520
agcctttttt	tttttttttt	aattgcaaca	atgcaaaagc	caagaaagta	taagggtcac	8580
aagtttaaac	aatgaattct	tcaacaggga	aaacagctag	cttgaaaact	tgctgaaaaa	8640
cacaacttgt	gtttatggca	tttagtacct	tcaaataatt	ggctttgcag	atattggata	8700
ccccattaaa	tctgacagtc	tcaaattttt	catctcttca	atcactagtc	aagaaaaata	8760
taaaaacaac	aaatacttcc	atatggagca	tttttcagag	ttttctaacc	cagtcttatt	8820
tttctagtca	gtaaacattt	gtaaaaatac	tgtttcacta	atacttactg	ttaactgtct	8880
tgagagaaaa	gaaaaaatatg	agagaactat	tgtttgggga	agttcaagtg	atctttcaat	8940
atcattacta	acttcttcca	ctttttccaa	aatttgaata	ttaacgctaa	aggtgtaaga	9000
cttcagattt	caaattaatc	tttctatatt	ttttaaattt	acagaatatt	atataaccca	9060
ctgctgaaaa	agaaaaaaat	gattgtttta	gaagttaaag	tcaatattga	ttttaaatat	9120
aagtaatgaa	ggcatatttc	caataactag	tgatatggca	tcgttgcaat	ttacagtatc	9180

```

ttcaaaaata cagaatttat agaataatth ctcctcattt aatatttttc aaaatcaaag 9240
ttatgggtttc ctcatthttac taaaatcgta ttctaattct tcattatagt aaatctatga 9300
gcaactcctt acttcgggttc ctctgatttc aaggccatat tttaaaaaat caaaaggcac 9360
tgtgaactat tttgaagaaa acacgacatt ttaatacaga ttgaaaggac ctcttctgaa 9420
gctagaaaca atctatagtt atacatcttc attaatactg tgttaccttt taaaatagta 9480
atthttttaca ttttcctgtg taaacctaat tgtggtagaa atthtttacca actctatact 9540
caatcaagca aaatttctgt atattccctg tggaatgtac ctatgtgagt ttcagaaatt 9600
ctcaaaatac gtgttcaaaa atthtctgctt ttgcatcttt gggacacctc agaaaactta 9660
ttaacaactg tgaatatgag aaatacagaa gaaaataata agccctctat acataaatgc 9720
ccagcacaat tcattgttaa aaaacaacca aacctcacac tactgtattt cattatctgt 9780
actgaaagca aatgctttgt gactattaaa tgttgacat cattcattca ctgtatagta 9840
atcattgact aaagccattt gctgtgtttt cttcttgtgg ntgnatatat caggtaaaat 9900
atthttccaaa gagccatgtg tcatgtaata ctgaaccctt tgatattgag acattaattt 9960
ggacccttgg tattatctac tagaataatg taatactgna gaaatattgc tctaattctt 10020
tcaaaatggg gcatccccct taaaangttc tathttccata aggatttagc ttgcttatcc 10080
cttcttatac cctaagatga agctgttttt gtgctctttg ttcatcattg gccctcattc 10140
caagcacttt acgctgtctg taatgggatc tathtttgca ctggaatata tgagaattgc 10200
aaaactagac aaaagtttca caacagattt ctaagttaaa tcattttcat taaaaggaaa 10260
aaagaaaaaa aattttgtat gtcaataact ttatatgaag tattaaaaatg catatttcta 10320
tgttgtaata taatgagtca caaaataaag ctgtgacagt tctgttaaaa aaaaaaaaaa 10380
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 10440
aa

```

<210> 2  
 <211> 2261  
 <212> PRT  
 <213> Homo sapiens

```

<400> 2
Met Ala Cys Trp Pro Gln Leu Arg Leu Leu Leu Trp Lys Asn Leu Thr
  1              5              10              15

Phe Arg Arg Arg Gln Thr Cys Gln Leu Leu Leu Glu Val Ala Trp Pro
      20              25              30

Leu Phe Ile Phe Leu Ile Leu Ile Ser Val Arg Leu Ser Tyr Pro Pro
      35              40              45

Tyr Glu Gln His Glu Cys His Phe Pro Asn Lys Ala Met Pro Ser Ala
      50              55              60

Gly Thr Leu Pro Trp Val Gln Gly Ile Ile Cys Asn Ala Asn Asn Pro
      65              70              75              80

Cys Phe Arg Tyr Pro Thr Pro Gly Glu Ala Pro Gly Val Val Gly Asn
      85              90              95

Phe Asn Lys Ser Ile Val Ala Arg Leu Phe Ser Asp Ala Arg Arg Leu

```

100	105	110
Leu Leu Tyr Ser Gln Lys Asp Thr Ser Met Lys Asp Met Arg Lys Val		
115	120	125
Leu Arg Thr Leu Gln Gln Ile Lys Lys Ser Ser Ser Asn Leu Lys Leu		
130	135	140
Gln Asp Phe Leu Val Asp Asn Glu Thr Phe Ser Gly Phe Leu Tyr His		
145	150	155
Asn Leu Ser Leu Pro Lys Ser Thr Val Asp Lys Met Leu Arg Ala Asp		
165	170	175
Val Ile Leu His Lys Val Phe Leu Gln Gly Tyr Gln Leu His Leu Thr		
180	185	190
Ser Leu Cys Asn Gly Ser Lys Ser Glu Glu Met Ile Gln Leu Gly Asp		
195	200	205
Gln Glu Val Ser Glu Leu Cys Gly Leu Pro Lys Glu Lys Leu Ala Ala		
210	215	220
Ala Glu Arg Val Leu Arg Ser Asn Met Asp Ile Leu Lys Pro Ile Leu		
225	230	235
Arg Thr Leu Asn Ser Thr Ser Pro Phe Pro Ser Lys Glu Leu Ala Glu		
245	250	255
Ala Thr Lys Thr Leu Leu His Ser Leu Gly Thr Leu Ala Gln Glu Leu		
260	265	270
Phe Ser Met Arg Ser Trp Ser Asp Met Arg Gln Glu Val Met Phe Leu		
275	280	285
Thr Asn Val Asn Ser Ser Ser Ser Ser Thr Gln Ile Tyr Gln Ala Val		
290	295	300
Ser Arg Ile Val Cys Gly His Pro Glu Gly Gly Gly Leu Lys Ile Lys		
305	310	315
Ser Leu Asn Trp Tyr Glu Asp Asn Asn Tyr Lys Ala Leu Phe Gly Gly		
325	330	335
Asn Gly Thr Glu Glu Asp Ala Glu Thr Phe Tyr Asp Asn Ser Thr Thr		
340	345	350
Pro Tyr Cys Asn Asp Leu Met Lys Asn Leu Glu Ser Ser Pro Leu Ser		

355		360		365
Arg Ile Ile Trp Lys Ala Leu Lys Pro Leu Leu Val Gly Lys Ile Leu				
370		375		380
Tyr Thr Pro Asp Thr Pro Ala Thr Arg Gln Val Met Ala Glu Val Asn				
385		390		395 400
Lys Thr Phe Gln Glu Leu Ala Val Phe His Asp Leu Glu Gly Met Trp				
	405		410	415
Glu Glu Leu Ser Pro Lys Ile Trp Thr Phe Met Glu Asn Ser Gln Glu				
	420		425	430
Met Asp Leu Val Arg Met Leu Leu Asp Ser Arg Asp Asn Asp His Phe				
	435		440	445
Trp Glu Gln Gln Leu Asp Gly Leu Asp Trp Thr Ala Gln Asp Ile Val				
	450		455	460
Ala Phe Leu Ala Lys His Pro Glu Asp Val Gln Ser Ser Asn Gly Ser				
	465		470	475 480
Val Tyr Thr Trp Arg Glu Ala Phe Asn Glu Thr Asn Gln Ala Ile Arg				
	485		490	495
Thr Ile Ser Arg Phe Met Glu Cys Val Asn Leu Asn Lys Leu Glu Pro				
	500		505	510
Ile Ala Thr Glu Val Trp Leu Ile Asn Lys Ser Met Glu Leu Leu Asp				
	515		520	525
Glu Arg Lys Phe Trp Ala Gly Ile Val Phe Thr Gly Ile Thr Pro Gly				
	530		535	540
Ser Ile Glu Leu Pro His His Val Lys Tyr Lys Ile Arg Met Asp Ile				
	545		550	555 560
Asp Asn Val Glu Arg Thr Asn Lys Ile Lys Asp Gly Tyr Trp Asp Pro				
	565		570	575
Gly Pro Arg Ala Asp Pro Phe Glu Asp Met Arg Tyr Val Trp Gly Gly				
	580		585	590
Phe Ala Tyr Leu Gln Asp Val Val Glu Gln Ala Ile Ile Arg Val Leu				
	595		600	605
Thr Gly Thr Glu Lys Lys Thr Gly Val Tyr Met Gln Gln Met Pro Tyr				

610	615	620
Pro Cys Tyr Val Asp Asp Ile Phe Leu Arg Val Met Ser Arg Ser Met		
625	630	635 640
Pro Leu Phe Met Thr Leu Ala Trp Ile Tyr Ser Val Ala Val Ile Ile		
	645	650 655
Lys Gly Ile Val Tyr Glu Lys Glu Ala Arg Leu Lys Glu Thr Met Arg		
	660	665 670
Ile Met Gly Leu Asp Asn Ser Ile Leu Trp Phe Ser Trp Phe Ile Ser		
	675	680 685
Ser Leu Ile Pro Leu Leu Val Ser Ala Gly Leu Leu Val Val Ile Leu		
	690	695 700
Lys Leu Gly Asn Leu Leu Pro Tyr Ser Asp Pro Ser Val Val Phe Val		
705	710	715 720
Phe Leu Ser Val Phe Ala Val Val Thr Ile Leu Gln Cys Phe Leu Ile		
	725	730 735
Ser Thr Leu Phe Ser Arg Ala Asn Leu Ala Ala Ala Cys Gly Gly Ile		
	740	745 750
Ile Tyr Phe Thr Leu Tyr Leu Pro Tyr Val Leu Cys Val Ala Trp Gln		
	755	760 765
Asp Tyr Val Gly Phe Thr Leu Lys Ile Phe Ala Ser Leu Leu Ser Pro		
	770	775 780
Val Ala Phe Gly Phe Gly Cys Glu Tyr Phe Ala Leu Phe Glu Glu Gln		
785	790	795 800
Gly Ile Gly Val Gln Trp Asp Asn Leu Phe Glu Ser Pro Val Glu Glu		
	805	810 815
Asp Gly Phe Asn Leu Thr Thr Ser Ile Ser Met Met Leu Phe Asp Thr		
	820	825 830
Phe Leu Tyr Gly Val Met Thr Trp Tyr Ile Glu Ala Val Phe Pro Gly		
	835	840 845
Gln Tyr Gly Ile Pro Arg Pro Trp Tyr Phe Pro Cys Thr Lys Ser Tyr		
850	855	860
Trp Phe Gly Glu Glu Ser Asp Glu Lys Ser His Pro Gly Ser Asn Gln		



865	870	875	880
Lys Arg Met Ser Glu Ile Cys Met Glu Glu Glu Pro Thr His Leu Lys			
885		890	895
Leu Gly Val Ser Ile Gln Asn Leu Val Lys Val Tyr Arg Asp Gly Met			
900	905		910
Lys Val Ala Val Asp Gly Leu Ala Leu Asn Phe Tyr Glu Gly Gln Ile			
915	920		925
Thr Ser Phe Leu Gly His Asn Gly Ala Gly Lys Thr Thr Thr Met Ser			
930	935	940	
Ile Leu Thr Gly Leu Phe Pro Pro Thr Ser Gly Thr Ala Tyr Ile Leu			
945	950	955	960
Gly Lys Asp Ile Arg Ser Glu Met Ser Thr Ile Arg Gln Asn Leu Gly			
965	970		975
Val Cys Pro Gln His Asn Val Leu Phe Asp Met Leu Thr Val Glu Glu			
980	985		990
His Ile Trp Phe Tyr Ala Arg Leu Lys Gly Leu Ser Glu Lys His Val			
995	1000	1005	
Lys Ala Glu Met Glu Gln Met Ala Leu Asp Val Gly Leu Pro Ser Ser			
1010	1015	1020	
Lys Leu Lys Ser Lys Thr Ser Gln Leu Ser Gly Gly Met Gln Arg Lys			
1025	1030	1035	1040
Leu Ser Val Ala Leu Ala Phe Val Gly Gly Ser Lys Val Val Ile Leu			
1045	1050		1055
Asp Glu Pro Thr Ala Gly Val Asp Pro Tyr Ser Arg Arg Gly Ile Trp			
1060	1065		1070
Glu Leu Leu Leu Lys Tyr Arg Gln Gly Arg Thr Ile Ile Leu Ser Thr			
1075	1080		1085
His His Met Asp Glu Ala Asp Val Leu Gly Asp Arg Ile Ala Ile Ile			
1090	1095	1100	
Ser His Gly Lys Leu Cys Cys Val Gly Ser Ser Leu Phe Leu Lys Asn			
1105	1110	1115	1120
Gln Leu Gly Thr Gly Tyr Tyr Leu Thr Leu Val Lys Lys Asp Val Glu			

1125	1130	1135
Ser Ser Leu Ser Ser Cys Arg Asn Ser Ser Ser Thr Val Ser Tyr Leu		
1140	1145	1150
Lys Lys Glu Asp Ser Val Ser Gln Ser Ser Ser Asp Ala Gly Leu Gly		
1155	1160	1165
Ser Asp His Glu Ser Asp Thr Leu Thr Ile Asp Val Ser Ala Ile Ser		
1170	1175	1180
Asn Leu Ile Arg Lys His Val Ser Glu Ala Arg Leu Val Glu Asp Ile		
1185	1190	1195 1200
Gly His Glu Leu Thr Tyr Val Leu Pro Tyr Glu Ala Ala Lys Glu Gly		
1205	1210	1215
Ala Phe Val Glu Leu Phe His Glu Ile Asp Asp Arg Leu Ser Asp Leu		
1220	1225	1230
Gly Ile Ser Ser Tyr Gly Ile Ser Glu Thr Thr Leu Glu Glu Ile Phe		
1235	1240	1245
Leu Lys Val Ala Glu Glu Ser Gly Val Asp Ala Glu Thr Ser Asp Gly		
1250	1255	1260
Thr Leu Pro Ala Arg Arg Asn Arg Arg Ala Phe Gly Asp Lys Gln Ser		
1265	1270	1275 1280
Cys Leu Arg Pro Phe Thr Glu Asp Asp Ala Ala Asp Pro Asn Asp Ser		
1285	1290	1295
Asp Ile Asp Pro Glu Ser Arg Glu Thr Asp Leu Leu Ser Gly Met Asp		
1300	1305	1310
Gly Lys Gly Ser Tyr Gln Val Lys Gly Trp Lys Leu Thr Gln Gln Gln		
1315	1320	1325
Phe Val Ala Leu Leu Trp Lys Arg Leu Leu Ile Ala Arg Arg Ser Arg		
1330	1335	1340
Lys Gly Phe Phe Ala Gln Ile Val Leu Pro Ala Val Phe Val Cys Ile		
1345	1350	1355 1360
Ala Leu Val Phe Ser Leu Ile Val Pro Pro Phe Gly Lys Tyr Pro Ser		
1365	1370	1375
Leu Glu Leu Gln Pro Trp Met Tyr Asn Glu Gln Tyr Thr Phe Val Ser		

1380	1385	1390
Asn Asp Ala Pro Glu Asp Thr Gly Thr Leu Glu Leu Leu Asn Ala Leu		
1395	1400	1405
Thr Lys Asp Pro Gly Phe Gly Thr Arg Cys Met Glu Gly Asn Pro Ile		
1410	1415	1420
Pro Asp Thr Pro Cys Gln Ala Gly Glu Glu Glu Trp Thr Thr Ala Pro		
1425	1430	1435 1440
Val Pro Gln Thr Ile Met Asp Leu Phe Gln Asn Gly Asn Trp Thr Met		
1445	1450	1455
Gln Asn Pro Ser Pro Ala Cys Gln Cys Ser Ser Asp Lys Ile Lys Lys		
1460	1465	1470
Met Leu Pro Val Cys Pro Pro Gly Ala Gly Gly Leu Pro Pro Pro Gln		
1475	1480	1485
Arg Lys Gln Asn Thr Ala Asp Ile Leu Gln Asp Leu Thr Gly Arg Asn		
1490	1495	1500
Ile Ser Asp Tyr Leu Val Lys Thr Tyr Val Gln Ile Ile Ala Lys Ser		
1505	1510	1515 1520
Leu Lys Asn Lys Ile Trp Val Asn Glu Phe Arg Tyr Gly Gly Phe Ser		
1525	1530	1535
Leu Gly Val Ser Asn Thr Gln Ala Leu Pro Pro Ser Gln Glu Val Asn		
1540	1545	1550
Asp Ala Ile Lys Gln Met Lys Lys His Leu Lys Leu Ala Lys Asp Ser		
1555	1560	1565
Ser Ala Asp Arg Phe Leu Asn Ser Leu Gly Arg Phe Met Thr Gly Leu		
1570	1575	1580
Asp Thr Arg Asn Asn Val Lys Val Trp Phe Asn Asn Lys Gly Trp His		
1585	1590	1595 1600
Ala Ile Ser Ser Phe Leu Asn Val Ile Asn Asn Ala Ile Leu Arg Ala		
1605	1610	1615
Asn Leu Gln Lys Gly Glu Asn Pro Ser His Tyr Gly Ile Thr Ala Phe		
1620	1625	1630
Asn His Pro Leu Asn Leu Thr Lys Gln Gln Leu Ser Glu Val Ala Leu		

1635	1640	1645
Met Thr Thr Ser Val Asp Val Leu Val Ser Ile Cys Val Ile Phe Ala		
1650	1655	1660
Met Ser Phe Val Pro Ala Ser Phe Val Val Phe Leu Ile Gln Glu Arg		
1665	1670	1675 1680
Val Ser Lys Ala Lys His Leu Gln Phe Ile Ser Gly Val Lys Pro Val		
1685	1690	1695
Ile Tyr Trp Leu Ser Asn Phe Val Trp Asp Met Cys Asn Tyr Val Val		
1700	1705	1710
Pro Ala Thr Leu Val Ile Ile Ile Phe Ile Cys Phe Gln Gln Lys Ser		
1715	1720	1725
Tyr Val Ser Ser Thr Asn Leu Pro Val Leu Ala Leu Leu Leu Leu Leu		
1730	1735	1740
Tyr Gly Trp Ser Ile Thr Pro Leu Met Tyr Pro Ala Ser Phe Val Phe		
1745	1750	1755 1760
Lys Ile Pro Ser Thr Ala Tyr Val Val Leu Thr Ser Val Asn Leu Phe		
1765	1770	1775
Ile Gly Ile Asn Gly Ser Val Ala Thr Phe Val Leu Glu Leu Phe Thr		
1780	1785	1790
Asp Asn Lys Leu Asn Asn Ile Asn Asp Ile Leu Lys Ser Val Phe Leu		
1795	1800	1805
Ile Phe Pro His Phe Cys Leu Gly Arg Gly Leu Ile Asp Met Val Lys		
1810	1815	1820
Asn Gln Ala Met Ala Asp Ala Leu Glu Arg Phe Gly Glu Asn Arg Phe		
1825	1830	1835 1840
Val Ser Pro Leu Ser Trp Asp Leu Val Gly Arg Asn Leu Phe Ala Met		
1845	1850	1855
Ala Val Glu Gly Val Val Phe Phe Leu Ile Thr Val Leu Ile Gln Tyr		
1860	1865	1870
Arg Phe Phe Ile Arg Pro Arg Pro Val Asn Ala Lys Leu Ser Pro Leu		
1875	1880	1885
Asn Asp Glu Asp Glu Asp Val Arg Arg Glu Arg Gln Arg Ile Leu Asp		

1890	1895	1900
Gly Gly Gly Gln Asn Asp Ile Leu Glu Ile Lys Glu Leu Thr Lys Ile 1905	1910	1915 1920
Tyr Arg Arg Lys Arg Lys Pro Ala Val Asp Arg Ile Cys Val Gly Ile 1925	1930	1935
Pro Pro Gly Glu Cys Phe Gly Leu Leu Gly Val Asn Gly Ala Gly Lys 1940	1945	1950
Ser Ser Thr Phe Lys Met Leu Thr Gly Asp Thr Thr Val Thr Arg Gly 1955	1960	1965
Asp Ala Phe Leu Asn Lys Asn Ser Ile Leu Ser Asn Ile His Glu Val 1970	1975	1980
His Gln Asn Met Gly Tyr Cys Pro Gln Phe Asp Ala Ile Thr Glu Leu 1985	1990	1995 2000
Leu Thr Gly Arg Glu His Val Glu Phe Phe Ala Leu Leu Arg Gly Val 2005	2010	2015
Pro Glu Lys Glu Val Gly Lys Val Gly Glu Trp Ala Ile Arg Lys Leu 2020	2025	2030
Gly Leu Val Lys Tyr Gly Glu Lys Tyr Ala Gly Asn Tyr Ser Gly Gly 2035	2040	2045
Asn Lys Arg Lys Leu Ser Thr Ala Met Ala Leu Ile Gly Gly Pro Pro 2050	2055	2060
Val Val Phe Leu Asp Glu Pro Thr Thr Gly Met Asp Pro Lys Ala Arg 2065	2070	2075 2080
Arg Phe Leu Trp Asn Cys Ala Leu Ser Val Val Lys Glu Gly Arg Ser 2085	2090	2095
Val Val Leu Thr Ser His Ser Met Glu Glu Cys Glu Ala Leu Cys Thr 2100	2105	2110
Arg Met Ala Ile Met Val Asn Gly Arg Phe Arg Cys Leu Gly Ser Val 2115	2120	2125
Gln His Leu Lys Asn Arg Phe Gly Asp Gly Tyr Thr Ile Val Val Arg 2130	2135	2140
Ile Ala Gly Ser Asn Pro Asp Leu Lys Pro Val Gln Asp Phe Phe Gly		

2145                      2150                      2155                      2160  
 Leu Ala Phe Pro Gly Ser Val Leu Lys Glu Lys His Arg Asn Met Leu  
                          2165                      2170                      2175  
 Gln Tyr Gln Leu Pro Ser Ser Leu Ser Ser Leu Ala Arg Ile Phe Ser  
                          2180                      2185                      2190  
 Ile Leu Ser Gln Ser Lys Lys Arg Leu His Ile Glu Asp Tyr Ser Val  
                          2195                      2200                      2205  
 Ser Gln Thr Thr Leu Asp Gln Val Phe Val Asn Phe Ala Lys Asp Gln  
                          2210                      2215                      2220  
 Ser Asp Asp Asp His Leu Lys Asp Leu Ser Leu His Lys Asn Gln Thr  
 2225                      2230                      2235                      2240  
 Val Val Asp Val Ala Val Leu Thr Ser Phe Leu Gln Asp Glu Lys Val  
                          2245                      2250                      2255  
 Lys Glu Ser Tyr Val  
                          2260

<210> 3

<211> 1643

<212> DNA

<213> Homo sapiens

<400> 3

gaattccttg ctgggtggctc cacatgcact tccagggcct gcttggctct tctatgggtc 60  
 tgtcctgagt gttgatagaa ccactgatgt gagtacctgg gcttgagcgt ggcctggaga 120  
 tcctgttgac tgtagcatgg agggggcctg tcagctgaat gtctgtatgc aggtgggtggg 180  
 agttctggaa tatgatggag ctggaggtgg gaagagaagt aggcttgggg cagctctctc 240  
 atgccacctc attctggcca aaactcaggt caaactgtga agagtctaaa tgtgaatctg 300  
 cccttcaagg tggctacaaa ggtatctttg tcaaggtagg agaccttggt gcctccacct 360  
 gcacttccag ggctgcttg gcctcttcta cgggtctgtc ctgagtcctc tatgaatctc 420  
 ccttcagggc agattcatat ttagactctt cacagtttga cctgagtttt ggccagaata 480  
 aggtgacatt tagtttgttg gcttgatgaa tgacttaaat atttagacat atgggtgtgta 540  
 ggctgacatt cctactcttg cctttttttt tgccctcca gtgttttggg tagttttgct 600  
 cccctacag ccaaaggcaa acagataagt tggaggtctg gagtggctac ataattttac 660  
 acgactgcaa ttctctggct gcacttcaca aatgtataca aactaaatac aagtcctgtg 720  
 tttttatcac agggaggctg atcaatataa tgaaattaaa agggggctgg tcccatattg 780  
 ttctgtgttt ttgtttgttt gtttctttt ttgtttttgt ggcctccttc ctctcaattt 840  
 atgaagagaa gcagtaagat gttcctctcg ggtcctctga gggacctggg gagctcaggc 900  
 tgggaatctc caaggcagta ggtcgcctat caaaaatcaa agtccagggt tgtgggggga 960  
 aaacaaaagc agcccattac ccagaggact gtccgccttc ccctcaccac agcctaggcc 1020  
 tttgaaagga aacaaaagac aagacaaaat gattggcgctc ctgagggaga ttcagcctag 1080

```

agctctctct cccccaatcc ctccctccgg ctgaggaaac taacaaagga aaaaaaaatt 1140
gcggaagca ggatttagag gaagcaaatt ccactggtgc ccttggtgc cggaacgtg 1200
gactagagag tctgcggcgc agccccgagc ccagcgcttc ccgcgctct taggccggcg 1260
ggcccgggcg ggggaagggg acgcagaccg cggaccctaa gacacctgct gtaccctcca 1320
ccccacccc acccacctcc ccccaactcc ctagatgtgt cgtgggcggc tgaacgtcgc 1380
ccgtttaagg ggcgggcccc ggctccacgt gctttctgct gactgactga actacataaa 1440
cagaggccgg gaacggggcg gggaggaggg agagcacagg ctttgaccga tagtaacctc 1500
tgcgctcggg gcagccgaat ctataaaagg aactagtccc ggcaaaaacc ccgtaattgc 1560
gagcgagagt gactggggcc gggacccgca gagccgagcc gacccttctc tcccgggctg 1620
cggcagggca gggcggggag ctc 1643

```

<210> 4

<211> 748

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> (1) .. (748)

<223> All n's are unknown.

<400> 4

```

attccaanaa cattttccng catctgtggt tgccaactca caatgtcttt cattttctga 60
acttaccnc caaatgaagn tcggcacgca attatgtagt agcnactctt agggcccccg 120
cttacactta tgcttccggc tngttgtgtg ggaattggac ggataccatt tcacncagga 180
aacagatatg nccatgatta cgccaagtta ttaggtgcn cgatagaata ctcaagcttg 240
gaattcgcgg ccgcagtcga cggacccccg ggaaagattc ctctcattac acaaaaacca 300
gacagtagtg gacgttgagc ttctcacatc ttctctacag gatgagaaag tgaaagaaag 360
ctatgtatga agaatcctgt tcatacgggg tggctgaaag taaagaggaa ctagactttc 420
ctttgcacca tgtgaagtgt tgtggagaaa agagccagaa gttgatgtgg gaagaagtaa 480
actggatact gtactgatac tattcaatgc aatgcaattc aatgcaatga aaacaaaatt 540
ccattacagg ggcagtgcct ttgtagccta tgtctgtat ggctctcaag tgaaagactt 600
gaatttagtt ttttacctat acctatgtga aactctatta tggaacccaa tggacatatg 660
ggtttgaact cacacttttt tttttttgtt cctgtgtatt ctcatgggg ttgcaacaat 720
aattcatcaa gtaaaaaaaa aaaaaaaaa 748

```

<210> 5

<211> 2011

<212> DNA

<213> Homo sapiens

<400> 5

```

agaatcctgt tcatactggg gtggcttgaa agtaaatgga ggaactagac tttcctttgc 60
accatgtgaa gtgtgtgga gaaaagagcc agaagtgtat gtgggaagaa gtaaactgga 120
tactgtactg atactattca atgcaatgca attcaatgca atgaaaacaa aattccatta 180
caggggcaag tgcttttgta gcccatgtct tgtatggctc tcaagtgaaa gacttgaatt 240
tagtttttta cctataccta tgtgaaactc tattatggaa cccaatggac atatgggttt 300
gaactcacac tttttttttt ttttgttcct gtgtattctc attgggggtg caacaataat 360

```

```

tcatcaagta atcatggcca gcgattattg atcaaaatca aaaggtaatg cacatcctca 420
ttcactaagc catgccatgc ccaggagact ggtttcccg tgacacatcc attgctggca 480
atgagtgtgc cagagttatt agtgccaagt ttttcagaaa gtttgaagca ccatgggtgtg 540
tcatgctcac ttttgtgaaa gctgctctgc tcagagtcta tcaacattga atatcagttg 600
acagaatggg gccatgctg gctaacatcc tgctttgatt ccctctgata agctgttctg 660
gtggcagtaa catgcaacaa aaatgtgggt gtctctaggc acgggaaact tggttccatt 720
gttatattgt cctatgcttc gagccatggg tctacagggt catccttatg agactcttaa 780
atatacttag atcctggtaa gaggcaaaga atcaacagcc aaactgctgg ggctgcaagc 840
tgctgaagcc agggcatggg attaaagaga ttgtgctgtc aaacctaggg aagcctgtgc 900
ccatttgtcc tgactgtctg ctaacatggg acactgcac tcaagatgtt tatctgacac 960
aagtgtatta tttctggctt tttgaattaa tctagaaaat gaaaagatgg agttgtattt 1020
tgacaaaaat gtttgtactt tttaatgtta tttggaattt taagtcttat cagtgacttc 1080
tgaatcctta gaatggcctc tttgtagaac cctgtgggtat agaggagtat ggccactgcc 1140
ccactatttt tattttctta tgtaagtttg catatcagtc atgactagtg cctagaaagc 1200
aatgtgatgg tcaggatctc atgacattat atttgagttt ctttcagatc atttaggata 1260
ctcttaatct cacttcatca atcaaatatt ttttgagtgt atgctgtagc tgaaagagta 1320
tgtacgtacg tataagacta gagagatatt aagtctcagt acacttcctg tgccatgtta 1380
ttcagctcac tggtttacia atataggttg tcttggtggt gtaggagccc actgtaacaa 1440
tattgggcag cttttttttt tttttttttt aattgcaaca atgcaaaagc caagaaagta 1500
taagggtcac aagtctaaac aatgaattct tcaacaggga aaacagctag ctagaaaact 1560
tgctgaaaac acaacttgtg tttatggcat ttagtacctt caaataattg gctttgcaga 1620
tattggatac cccattaaat ctgacagtct caaatttttc atctcttcaa tcactagtca 1680
agaaaaatat aaaaacaaca aatacttcca tatggagcat ttttcagagt tttctaacc 1740
agtcttattt ttctagtcag taaacatttg taaaaatact gtttcactaa tacttactgt 1800
taactgtctt gagagaaaag aaaaatatga gagaactatt gtttggggaa gttcaagtga 1860
tctttcaata tcattactaa cttcttccac tttttccaaa atttgaatat taacgctaaa 1920
ggtgtaagga cttcagattt caaattaatc tttctatatt ttttaaattt acagaatatt 1980
atataacca ctgctgaaaa aaaaaaaaaa a
2011

```

<210> 6

<211> 3366

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> (1)..(3366)

<223> All n's are unknown.

<400> 6

```

agaatcctgt tcatacgggg tggctgaaag taaagaggaa ctagactttc ctttgcacca 60
tgtgaagtgt tgtggagaaa agagccagaa gttgatgtgg gaagaagtaa actggatact 120
gtactgatac tattcaatgc aatgcaattc aatgcaatga aaacaaaatt ccattacagg 180
ggcagtgctt ttgtagccta tgtcttgat ggctctcaag tgaaagactt gaatttagtt 240
ttttacctat acctatgtga aactctatta tggaacccaa tggacatatg ggtttgaact 300
cacacttttt tttttttttt gttcctgtgt attctcattg gggttgcaac aataattcat 360
caagtaatca tggccagcga ttattgatca aaatcaaaag gtaatgcaca tcctcattca 420
ctaagccatg ccatgcccag gagactgggt tcccgggtgac acatccattg ctggcaatga 480

```



gtgtgccaga	gttattagt	ccaagttttt	cagaaagttt	gaagcaccat	ggtgtgtcat	540
gctcactttt	gtgaaagctg	ctctgctcag	agtctatcaa	cattgaatat	cagttgacag	600
aatgggtgcca	tgcgtggcta	acatcctgct	ttgattccct	ctgataagct	gttctgggtg	660
cagtaacatg	caacaaaaat	gtgggtgtct	ctaggcacgg	gaaacttggg	tccattgtta	720
tattgtccta	tgcttcgagc	catgggtcta	cagggtcata	cttatgagac	tcttaaatat	780
acttagatcc	tggttaagagg	caaagaatca	acagccaaac	tgctggggct	gcaagctgct	840
gaagccaggg	catgggatta	aagagattgt	gcgttcaaac	ctagggaagc	ctgtgcccac	900
ttgtcctgac	tgtctgctaa	catggtacac	tgcatctcaa	gatgtttatc	tgacacaagt	960
gtattatttc	tggttttttg	aattaatcta	gaaaatgaaa	agatggagtt	gtattttgac	1020
aaaaatgttt	gtacttttta	atgttatatt	gaattttaag	ttctatcagt	gacttctgaa	1080
tccttagaat	ggcctctttg	tagaacctg	tggtatagag	gagtatggcc	actgccccac	1140
tattttttatt	ttcttatgta	agtttgcata	tcagtcatga	ctagtgccta	gaaagcaatg	1200
tgatgggtcag	gatctcatga	cattatattt	gagtttcttt	cagatcattt	aggatactct	1260
taatctcact	tcatcaatca	aatatttttt	gagtgtatgc	tgtagctgaa	agagtatgta	1320
cgtacgtata	agactagaga	gatattaagt	ctcagtacac	ttcctgtgcc	atgttattca	1380
gctcactggg	ttacaaatat	aggttgtctt	gtgggtgtag	gagcccactg	taacaatat	1440
gggcagcctt	tttttttttt	ttttaattgc	aacaatgcaa	aagccaagaa	agtataagg	1500
tcacaagttt	aaacaatgaa	ttcttcaaca	gggaaaacag	ctagcttgaa	aacttgctga	1560
aaaacacaac	ttgtgtttat	ggcatttagt	accttcaaat	aattggcttt	gcagatattg	1620
gatacccat	taaatctgac	agtctcaaat	tttcatctc	ttcaatcact	agtcaagaaa	1680
aatataaaaa	caacaaatac	ttccatatgg	agcatttttc	agagttttct	aaccagctct	1740
tattttttcta	gtcagtaaac	atttgtaaaa	atactgtttc	actaataact	actgttaact	1800
gtcttgagag	aaaagaaaaa	tatgagagaa	ctattgtttg	gggaagtcca	agtgatcttt	1860
caatatcatt	actaacttct	tccacttttt	ccaaaatttg	aatattaacg	ctaaagggtg	1920
aagacttcag	atttcaaatt	aatctttcta	tattttttta	atttacagaa	tattatataa	1980
cccactgctg	aaaaagaaaa	aatgattgt	tttagaagtt	aaagtcaata	ttgattttta	2040
atataagtaa	tgaaggcata	tttccaataa	ctagtgat	ggcatcgttg	caatttacag	2100
tatcttcaaa	aatacagaat	ttatagaata	atttctctc	atttaatat	tttcaaaatc	2160
aaagttagtg	tttctcatt	ttactaaaat	cgtattctaa	ttcttcatta	tagtaaatct	2220
atgagcaact	ccttacttcg	gttctctgta	tttcaaggcc	atatttttaa	aaatcaaaag	2280
gcactgtgaa	ctattttgaa	gaaaacacga	cattttaata	cagattgaaa	ggacctcttc	2340
tgaagctaga	aacaatctat	agttatacat	cttcattaat	actgtgttac	cttttaaaat	2400
agtaattttt	tacatttttc	tgtgtaaacc	taattgtggg	agaaattttt	accaactcta	2460
tactcaatca	agcaaaattt	ctgtatatct	cctgtggaat	gtacctatgt	gagtttcaga	2520
aattctcaaa	atacgtgttc	aaaaatttct	gcttttgcat	ctttgggaca	cctcagaaaa	2580
cttattaaca	actgtgaata	tgagaaatac	agaagaaaat	aataagccct	ctatacataa	2640
atgccagca	caattcattg	ttaaaaaaca	accaaaccct	acactactgt	atttcattat	2700
ctgtactgaa	agcaaatgct	ttgtgactat	taaatgttgc	acatcattca	ttcactgtat	2760
agtaatcatt	gactaaagcc	atttgctgtg	ttttcttctt	gtggntgnat	atatcaggta	2820
aaatattttt	caaagagcca	tgtgtcatgt	aatactgaac	cctttgat	tgagacatta	2880
atttggaacc	ttggtattat	ctactagaat	aatgtaatac	tnagaaata	ttgctcta	2940
tctttcaaaa	tggtgcatcc	cccttaaaan	gttctatttc	cataaggatt	tagcttgctt	3000
atcccttctt	ataccctaag	atgaagctgt	ttttgtgtc	tttggtcatc	attggccctc	3060
attccaagca	ctttacgctg	tctgtaaatg	gatctatttt	tgcactggaa	tatctgagaa	3120
ttgcaaaact	agacaaaagt	ttcacaacag	atttctaagt	taaatcattt	tcattaaaag	3180
gaaaaaagaa	aaaaaatttt	gtatgtcaat	aactttatat	gaagtattaa	aatgcataat	3240
tctatgttgt	aatataatga	gtcacaaaaa	aaagctgtga	cagttctgtt	aaaaaaaaaa	3300
aaaaaaaaaa	aaaaaaaaaa	aaaaaaaaaa	aaaaaaaaaa	aaaaaaaaaa	aaaaaaaaaa	3360

aaaaaa

3366

<210> 7

<211> 10474

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> (1) .. (10474)

<223> All n's are unknown.

<400> 7

```
tctagaactg ggtaccagct gctagcaagc ttcggcacga gccgcagagc cgagccgacc 60
cttctctccc gggctgctgc agggcagggc ggggagctcc gcgcaccaac agagccggtt 120
ctcagggcgc tttgctcctt gttttttccc cggttctggt ttctcccctt ctccggaagg 180
cttgtcaagg ggtaggagaa agagacgcaa acacaaaagt ggaaaacagt taatgaccag 240
ccacgggctg cctgctgtg agctctggcc gctgccttcc agggctcccg agccacacgc 300
tgggcgtgct ggctgagggg acatggcttg ttggcctcag ctgaggttgc tgctgtggaa 360
gaacctcact ttcagaagaa gacaaacatg tcagctgtta ctggaagtgg cctggcctct 420
atttatcttc ctgacctga tctctgttcg gctgagctac ccaccctatg aacaacatga 480
atgccatttt ccaaataaag ccatgccctc tgcaggaaca cttccttggg ttcaggggat 540
tatctgtaat gccacaaccc cctgtttccg ttacccgact cctggggagg ctcccggagt 600
tgttggaaac tttaacaaat ccattgtggc tcgcctgttc tcagatgctc ggaggcttct 660
tttatacagc cagaaagaca ccagcatgaa ggacatgcgc aaagttctga gaacattaca 720
gcagatcaag aaatccagct caaacttgaa gcttcaagat ttcctggtgg acaatgaaac 780
cttctctggg ttcctatatc acaacctctc tctcccaaag tctactgtgg acaagatgct 840
gagggctgat gtcattctcc acaaggtatt tttgcaaggc taccagttac atttgacaag 900
tctgtgcaat ggatcaaaat cagaagagat gattcaactt ggtgaccaag aagtttctga 960
gctttgtggc ctaccaaagg agaaactggc tgcagcagag cgagtacttc gttccaacat 1020
ggacatcctg aagccaatcc tgagaacact aaactctaca tctcccttcc cgagcaagga 1080
gctggctgaa gccacaaaaa cattgctgca tagtcttggg actctggccc aggagctggt 1140
cagcatgaga agctggagtg acatgcgaca ggaggtgatg tttctgacca atgtgaacag 1200
ctccagctcc tccacccaaa tctaccaggc tgtgtctcgt attgtctgcg ggcatcccga 1260
gggagggggg ctgaagatca agtctctcaa ctggtatgag gacaacaact acaaagccct 1320
ctttggaggc aatggcactg aggaagatgc tgaaaccttc tatgacaact ctacaactcc 1380
ttactgcaat gatttgatga agaatttgga gtctagtcct ctttcccgca ttatctggaa 1440
agctctgaag ccgctgctcg ttgggaagat cctgtataca cctgacactc cagccacaag 1500
gcaggtcatg gctgaggtga acaagacctt ccaggaactg gctgtgttcc atgatctgga 1560
aggcatgtgg gaggaactca gcccgaagat ctggaccttc atggagaaca gccaagaaat 1620
ggaccttgtc cggatgctgt tggacagcag ggacaatgac cacttttggg aacagcagtt 1680
ggatggctta gattggacag cccaagacat cgtggcggtt ttggccaagc acccagagga 1740
tgtccagtcc agtaatggtt ctgtgtacac ctggagagaa gctttcaacg agactaacca 1800
ggcaatccgg accatatctc gcttcatgga gtgtgtcaac ctgaacaagc tagaaccat 1860
agcaacagaa gtctggctca tcaacaagtc catggagctg ctggatgaga ggaagttctg 1920
ggctggtatt gtgttcactg gaattactcc aggcagcatt gagctgcccc atcatgtcaa 1980
gtacaagatc cgaatggaca ttgacaatgt ggagaggaca aataaaatca aggatgggta 2040
ctgggaccct ggtcctcgag ctgaccctt tgaggacatg cggtacgtct gggggggctt 2100
```

cgcctacttg	cgggatgtgg	tggagcaggg	aatcatcagg	gtgctgacgg	gcaccgagaa	2160
gaaaactggg	gtctatatgc	aacagatgcc	ctatccctgt	tacgttgatg	acatctttct	2220
gcggggtgatg	agccgggtcaa	tgccccctctt	catgacgctg	gcctggattt	actcagtggc	2280
tgtgatcatc	aagggcatcg	tgtatgagaa	ggaggcacgg	ctgaaagaga	ccatgcggat	2340
catgggcctg	gacaacagca	tactctggtt	tagctggttc	attagtagcc	tcattcctct	2400
tcttgtgagc	gctggcctgc	tagtgggtcat	cctgaagtta	ggaaacctgc	tgccctacag	2460
tgatcccagc	gtgggtgttg	tcttctgtgc	cgtgtttgct	gtggtgacaa	tcctgcagtg	2520
cttcttgatt	agcacactct	tctccagagc	caacctggca	gcagcctgtg	ggggcatcat	2580
ctacttcacg	ctgtacctgc	cctacgtcct	gtgtgtggca	tggcaggact	acgtgggctt	2640
cacactcaag	atcttcgcta	gcctgctgtc	tcctgtggct	tttgggtttg	gctgtgagta	2700
ctttgccctt	tttgaggagc	agggcattgg	agtgcagtgg	gacaacctgt	ttgagagtcc	2760
tgtggaggaa	gatggcttca	atctcaccac	ttcgatctcc	atgatgctgt	ttgacacctt	2820
cctctatggg	gtgatgacct	ggtacattga	ggctgtcttt	ccaggccagt	acggaattcc	2880
caggccctgg	tattttcctt	gcaccaagtc	ctactggttt	ggcgaggaaa	gtgatgagaa	2940
gagccaccct	ggttccaacc	agaagagaat	gtcagaaatc	tgcatggagg	aggaaccac	3000
ccacttgaag	ctgggcgtgt	ccattcagaa	cctggtaaaa	gtctaccgag	atgggatgaa	3060
ggtggctgtc	gatggcctgg	cactgaattt	ttatgagggc	cagatcacct	ccttcctggg	3120
ccacaatgga	gcggggaaga	cgaccaccat	gtcaatcctg	accgggttgt	tcccccgac	3180
ctcgggcacc	gcctacatcc	tgggaaaaga	cattcgctct	gagatgagca	ccatccggca	3240
gaacctgggg	gtctgtcccc	agcataacgt	gctgtttgac	atgctgactg	tcgaagaaca	3300
catctggttc	tatgcccgtc	tgaaagggtc	ctctgagaag	cacgtgaagg	cggagatgga	3360
gcagatggcc	ctggatgttg	gtttgccatc	aagcaagctg	aaaagcaaaa	caagccagct	3420
gtcaggtgga	atgcagagaa	agctatctgt	ggccttggcc	tttgtcgggg	gatctaaggt	3480
tgtcattctg	gatgaaccca	cagctgggtg	ggacccttac	tcccgagggg	gaatatggga	3540
gctgctgctg	aaataccgac	aaggccgcac	cattattctc	tctacacacc	acatggatga	3600
agcggacgtc	ctgggggaca	ggattgccat	catctcccat	gggaagctgt	gctgtgtggg	3660
ctcctccctg	tttctgaaga	accagctggg	aacaggctac	tacctgacct	tgggtcaagaa	3720
agatgtggaa	tcctccctca	gttctgcag	aaacagtagt	agcactgtgt	catacctgaa	3780
aaaggaggac	agtgtttctc	agagcagttc	tgatgctggc	ctgggcagcg	accatgagag	3840
tgacacgctg	accatcgatg	tctctgctat	ctccaacctc	atcaggaagc	atgtgtctga	3900
agcccggctg	gtggaagaca	tagggcatga	gctgacctat	gtgctgccat	atgaagctgc	3960
taaggaggga	gcctttgtgg	aactctttca	tgagattgat	gaccggctct	cagacctggg	4020
catttctagt	tatggcatct	cagagacgac	cctggaagaa	atattcctca	aggtggccga	4080
agagagtggg	gtggatgctg	agacctcaga	tggtaccttg	ccagcaagac	gaaacaggcg	4140
ggccttcggg	gacaagcaga	gctgtcttcg	cccgttcact	gaagatgatg	ctgctgatcc	4200
aaatgattct	gacatagacc	cagaatccag	agagacagac	ttgctcagtg	ggatggatgg	4260
caaaggggtcc	taccaggtga	aaggctggaa	acttacacag	caacagtttg	tggccctttt	4320
gtggaagaga	ctgctaattg	ccagacggag	tcggaaagga	ttttttgctc	agattgtctt	4380
gccagctgtg	tttgtctgca	ttgcccttgt	gttcagcctg	atcgtgccac	cctttggcaa	4440
gtaccccagc	ctggaacttc	agccctggat	gtacaacgaa	cagtacacat	ttgtcagcaa	4500
tgatgctcct	gaggacacgg	gaaccctgga	actcttaaac	gccctcacca	aagaccctgg	4560
cttcgggacc	cgctgtatgg	aaggaaaccc	aatcccagac	acgccctgcc	aggcagggga	4620
ggaagagtgg	accactgccc	cagttcccca	gaccatcatg	gacctcttcc	agaatgggaa	4680
ctggacaatg	cagaaccttt	cacctgcatg	ccagtgtagc	agcgacaaaa	tcaagaagat	4740
gctgcctgtg	tgtccccag	gggcaggggg	gctgcctcct	ccacaaagaa	aacaaaacac	4800
tgacagatgc	cttcaggacc	tgacaggaag	aaacatttctg	gattatctgg	tgaagacgta	4860
tgtgcagatc	atagccaaaa	gcttaaagaa	caagatctgg	gtgaatgagt	ttaggtatgg	4920
cggcttttcc	ctgggtgtca	gtaatactca	agcacttcct	ccgagtcaag	aagttaatga	4980

tgceatcaaa	caaatagaaga	aacacctaata	gctggccaag	gacagttctg	cagatcgatt	5040
tctcaacagc	ttgggaagat	ttatgacagg	actggacacc	agaaataatg	tcaaggtgtg	5100
gttcaataac	aagggctggc	atgcaatcag	ctctttcctg	aatgtcatca	acaatgccat	5160
tctccggggc	aacctgcaaa	agggagagaa	ccctagccat	tatggaatta	ctgctttcaa	5220
tcatccccctg	aatctcacca	agcagcagct	ctcagaggtg	gctctgatga	ccacatcagt	5280
ggatgtcctt	gtgtccatct	gtgtcatctt	tgcaatgtcc	ttcgtcccag	ccagctttgt	5340
cgtattcctg	atccaggagc	gggtcagcaa	agcaaaacac	ctgcagttca	tcagtggagt	5400
gaagcctgtc	atctactggc	tctctaattt	tgtctgggat	atgtgcaatt	acgttgtccc	5460
tgccacactg	gtcattatca	tcttcatctg	cttccagcag	aagtcctatg	tgctcctccac	5520
caatctgcct	gtgctagccc	ttctactttt	gctgtatggg	tggatcaatca	cacctctcat	5580
gtaccagacc	tcctttgtgt	tcaagatccc	cagcacagcc	tatgtgggtg	tcaccagcgt	5640
gaacctcttc	attggcatta	atggcagcgt	ggccaccttt	gtgctggagc	tgttcaccca	5700
caataagctg	aataatatca	atgatatcct	gaagtccgtg	ttcttgatct	ttccacattt	5760
ttgcctggga	cgagggtca	tcgacatggg	gaaaaaccag	gcaatggctg	atgccctgga	5820
aaggtttggg	gagaatcgct	ttgtgtcacc	attatcttgg	gacttgggtg	gacgaaacct	5880
cttcgccatg	gccgtggaag	gggtgggtgt	cttcctcatt	actgttctga	tccagtacag	5940
attcttcatc	agggccagac	ctgtaaatgc	aaagctatct	cctctgaatg	atgaagatga	6000
agatgtgagg	cgaggaaagac	agagaattct	tgatgggtga	ggccagaatg	acatcttaga	6060
aatcaaggag	ttgacgaaga	tatatagaag	gaagcggaag	cctgctgttg	acaggatttg	6120
cgtgggcatt	cctcctgggt	agtgccttgg	gctcctggga	gttaatgggg	ctggaaaatc	6180
atcaactttc	aagatgttaa	caggagatac	cactgttacc	agaggagatg	ctttccttaa	6240
caaaaatagt	atcttatcaa	acatccatga	agtacatcag	aacatgggct	actgccctca	6300
gtttgatgcc	atcacagagc	tgttgactgg	gagagaacac	gtggagtctt	ttgccctttt	6360
gagaggagtc	ccagagaaaag	aagttggcaa	ggttgggtgag	tgggcgattc	ggaaactggg	6420
cctcgtgaag	tatggagaaa	aatatgctgg	taactatagt	ggaggcaaca	aacgcaagct	6480
ctctacagcc	atggctttga	tcggcggggc	tcctgtgggtg	tttctggatg	aaccaccacc	6540
aggcatggat	cccaaagccc	ggcggttctt	gtggaattgt	gccctaagtg	ttgtcaagga	6600
ggggagatca	gtagtgttta	catctcatag	tatggaagaa	tgtgaagctc	tttgacttag	6660
gatggcaatc	atggtcaatg	gaaggttcag	gtgccttggc	agtgtccagc	atctaaaaaa	6720
taggtttgga	gatggttata	caatagtgtg	acgaatagca	gggtccaacc	cggacctgaa	6780
gcctgtccag	gatttctttg	gacttgcatt	tcctggaagt	gttctaaaag	agaaacaccg	6840
gaacatgcta	caataccagc	ttccatcttc	attatcttct	ctggccagga	tattcagcat	6900
cctctcccag	agcaaaaagc	gactccacat	agaagactac	tctgtttctc	agacaacact	6960
tgaccaagta	tttgtgaact	ttgccaagga	ccaaagtgat	gatgaccact	taaaagacct	7020
ctcattacac	aaaaaccaga	cagtagtgga	cgttgacgtt	ctcacatctt	ttctacagga	7080
tgagaaaagt	aaagaaaagct	atgtatgaag	aatcctgttc	atacgggggtg	gctgaaaagta	7140
aagaggaact	agactttcct	ttgcaccatg	tgaagtgttg	tggagaaaag	agccagaagt	7200
tgatgtggga	agaagtaaac	tggatactgt	actgatacta	ttcaatgcaa	tgcaattcaa	7260
tgcaatgaaa	acaaaattcc	attacagggg	cagtgccttt	gtagcctatg	tcttgtatgg	7320
ctctcaagt	aaagacttga	atttagtttt	ttacctatac	ctatgtgaaa	ctctattatg	7380
gaaccaaatg	gacatatggg	tttgaactca	cacttttttt	ttttttttgt	tcctgtgtat	7440
tctcattggg	gttgcaacaa	taattcatca	agtaatcatg	gccagcgatt	attgatcaaa	7500
atcaaaaagt	aatgcacatc	ctcattcact	aagccatgcc	atgccagga	gactggtttc	7560
ccggtgacac	atccattgct	ggcaatgagt	gtgccagagt	tattagtgcc	aagtttttca	7620
gaaagtgtga	agcaccatgg	tgtgtcatgc	tcacttttgt	gaaagctgct	ctgctcagag	7680
tctatcaaca	ttgaatatca	gttgacagaa	tggtgccatg	cgtggctaac	atcctgcttt	7740
gattccctct	gataagctgt	tctggtggca	gtaacatgca	acaaaaatgt	gggtgtctct	7800
aggcacggga	aacttgggtc	cattgttata	ttgtcctatg	cttcgagcca	tgggtctaca	7860

gggtcatcct	tatgagactc	ttaaatatac	ttagatcctg	gtaagaggca	aagaatcaac	7920
agccaaactg	ctggggctgc	aagctgctga	agccagggca	tgggattaaa	gagattgtgc	7980
gttcaaacct	aggggaagcct	gtgcccat	gtcctgactg	tctgctaaca	tggtacactg	8040
catctcaaga	tgtttatctg	acacaagtgt	attatctctg	gctttttgaa	ttaatctaga	8100
aaatgaaaag	atggagttgt	atcttgacaa	aaatgtttgt	actttttaat	gttatttgga	8160
atcttaagtt	ctatcagtga	cttctgaatc	cttagaatgg	cctctttgta	gaaccctgtg	8220
gtatagagga	gtatggccac	tgccccacta	tttttatttt	cttatgtaag	tttgcataatc	8280
agtcattgact	agtgccctaga	aagcaatgtg	atgggtcagga	tctcatgaca	ttatatttga	8340
gtttctttca	gatcatttag	gatactctta	atctcacttc	atcaatcaaa	tatttttttga	8400
gtgtatgctg	tagctgaaag	agtatgtacg	tacgtataag	actagagaga	tattaagtct	8460
cagtacactt	cctgtgccat	gttattcagc	tcactgggtt	acaaatatag	gttgtcttgt	8520
gggtgtagga	gccactgta	acaatattgg	gcagcctttt	tttttttttt	ttaattgcaa	8580
caatgcaaaa	gccaaagaaag	tataaggggtc	acaagttaa	acaatgaatt	cttcaacagg	8640
gaaaacagct	agcttgaaaa	cttgctgaaa	aacacaactt	gtgtttatgg	catttagtac	8700
cttcaaataa	ttggctttgc	agatattgga	taccccat	aatctgacag	tctcaaattt	8760
ttcatctctt	caatcactag	tcaagaaaaa	tataaaaaaca	acaaataactt	ccatattggag	8820
catttttccag	agttttctaa	cccagtcctta	tttttctagt	cagtaaaca	ttgtaaaaat	8880
actgtttcac	taatacttac	tggttaactgt	cttgagagaa	aagaaaaata	tgagagaact	8940
attgtttggg	gaagttcaag	tgatctttca	atatcattac	taacttcttc	cactttttcc	9000
aaaatttgaa	tattaacgct	aaaggtgtaa	gacttcagat	ttcaaattaa	tctttctata	9060
ttttttaaat	ttacagaata	ttatataacc	cactgctgaa	aaagaaaaaa	atgattgttt	9120
tagaagttaa	agtcaatatt	gattttaaat	ataagtaatg	aaggcatatt	tccaataact	9180
agtgatatgg	catcgttgca	atttacagta	tcttcaaaaa	tacagaattt	atagaataat	9240
ttctcctcat	ttaatatttt	tcaaaatcaa	agttatgggt	tcctcatttt	actaaaatcg	9300
tatttctaatt	cttcattata	gtaaatctat	gagcaactcc	ttacttcggg	tcctctgatt	9360
tcaaggccat	atcttataaaa	atcaaaaaggc	actgtgaact	atcttgaaga	aaacacgaca	9420
ttttaataca	gattgaaagg	acctcttctg	aagctagaaa	caatctatag	ttatacatct	9480
tcattaatac	tggtgtacct	tttaaaatag	taatttttta	cattttcctg	tgtaaaccta	9540
attgtggtag	aaatttttac	caactctata	ctcaatcaag	caaaatttct	gtatattccc	9600
tgtggaatgt	acctatgtga	gtttcagaaa	ttctcaaaat	acgtgttcaa	aaatttctgc	9660
ttttgcatct	ttgggacacc	tcagaaaact	tattaacaac	tgtgaatatg	agaaatacag	9720
aagaaaaataa	taagccctct	atacataaat	gccagcaca	attcattgtt	aaaaaacaac	9780
caaacctcac	actactgtat	ttcattatct	gtactgaaag	caaatgcttt	gtgactatta	9840
aatgttgcac	atcattcatt	cactgtatag	taatcattga	ctaaagccat	ttgctgtgtt	9900
ttcttcttgt	ggntgnatat	atcaggtaaa	atattttcca	aagagccatg	tgtcatgtaa	9960
tactgaaccc	tttgatattg	agacattaat	ttggaccctt	ggtattatct	actagaataa	10020
tgtaatactg	nagaaatatt	gctctaattc	tttcaaaatg	gtgcatcccc	cttaaaangt	10080
tctattttcca	taaggattta	gcttgcttat	cccttcttat	accctaagat	gaagctgttt	10140
ttgtgctctt	tggtcatcat	tgccctcat	tccaagcact	ttacgctgtc	tgtaatggga	10200
tctatttttg	cactggaata	tctgagaatt	gcaaaaactag	acaaaagttt	cacaacagat	10260
ttctaagtta	aatcattttt	attaaaagga	aaaaagaaaa	aaaattttgt	atgtcaataa	10320
ctttatatga	agtattaaaa	tgcatatttc	tatgttgtaa	tataatgagt	cacaaaaataa	10380
agctgtgaca	gttctgttaa	aaaaaaaaaa	aaaaaaaaaa	aaaaaaaaaa	aaaaaaaaaa	10440
aaaaaaaaaa	aaaaaaaaaa	aaaaaaaaaa	aaaa			10474

<210> 8

<211> 2261

<212> PRT

<213> Homo sapiens

<400> 8

Met	Ala	Cys	Trp	Pro	Gln	Leu	Arg	Leu	Leu	Leu	Trp	Lys	Asn	Leu	Thr
1				5				10						15	
Phe	Arg	Arg	Arg	Gln	Thr	Cys	Gln	Leu	Leu	Leu	Glu	Val	Ala	Trp	Pro
			20					25					30		
Leu	Phe	Ile	Phe	Leu	Ile	Leu	Ile	Ser	Val	Arg	Leu	Ser	Tyr	Pro	Pro
	35					40						45			
Tyr	Glu	Gln	His	Glu	Cys	His	Phe	Pro	Asn	Lys	Ala	Met	Pro	Ser	Ala
	50					55					60				
Gly	Thr	Leu	Pro	Trp	Val	Gln	Gly	Ile	Ile	Cys	Asn	Ala	Asn	Asn	Pro
65					70					75					80
Cys	Phe	Arg	Tyr	Pro	Thr	Pro	Gly	Glu	Ala	Pro	Gly	Val	Val	Gly	Asn
				85					90						95
Phe	Asn	Lys	Ser	Ile	Val	Ala	Arg	Leu	Phe	Ser	Asp	Ala	Arg	Arg	Leu
		100						105					110		
Leu	Leu	Tyr	Ser	Gln	Lys	Asp	Thr	Ser	Met	Lys	Asp	Met	Arg	Lys	Val
		115					120					125			
Leu	Arg	Thr	Leu	Gln	Gln	Ile	Lys	Lys	Ser	Ser	Ser	Asn	Leu	Lys	Leu
	130					135					140				
Gln	Asp	Phe	Leu	Val	Asp	Asn	Glu	Thr	Phe	Ser	Gly	Phe	Leu	Tyr	His
145					150					155					160
Asn	Leu	Ser	Leu	Pro	Lys	Ser	Thr	Val	Asp	Lys	Met	Leu	Arg	Ala	Asp
				165					170					175	
Val	Ile	Leu	His	Lys	Val	Phe	Leu	Gln	Gly	Tyr	Gln	Leu	His	Leu	Thr
			180						185				190		
Ser	Leu	Cys	Asn	Gly	Ser	Lys	Ser	Glu	Glu	Met	Ile	Gln	Leu	Gly	Asp
		195					200					205			
Gln	Glu	Val	Ser	Glu	Leu	Cys	Gly	Leu	Pro	Lys	Glu	Lys	Leu	Ala	Ala
	210					215					220				
Ala	Glu	Arg	Val	Leu	Arg	Ser	Asn	Met	Asp	Ile	Leu	Lys	Pro	Ile	Leu
225					230					235					240

Arg	Thr	Leu	Asn	Ser	Thr	Ser	Pro	Phe	Pro	Ser	Lys	Glu	Leu	Ala	Glu	245	250	255
Ala	Thr	Lys	Thr	Leu	Leu	His	Ser	Leu	Gly	Thr	Leu	Ala	Gln	Glu	Leu	260	265	270
Phe	Ser	Met	Arg	Ser	Trp	Ser	Asp	Met	Arg	Gln	Glu	Val	Met	Phe	Leu	275	280	285
Thr	Asn	Val	Asn	Ser	Ser	Ser	Ser	Ser	Thr	Gln	Ile	Tyr	Gln	Ala	Val	290	295	300
Ser	Arg	Ile	Val	Cys	Gly	His	Pro	Glu	Gly	Gly	Gly	Leu	Lys	Ile	Lys	305	310	315 320
Ser	Leu	Asn	Trp	Tyr	Glu	Asp	Asn	Asn	Tyr	Lys	Ala	Leu	Phe	Gly	Gly	325	330	335
Asn	Gly	Thr	Glu	Glu	Asp	Ala	Glu	Thr	Phe	Tyr	Asp	Asn	Ser	Thr	Thr	340	345	350
Pro	Tyr	Cys	Asn	Asp	Leu	Met	Lys	Asn	Leu	Glu	Ser	Ser	Pro	Leu	Ser	355	360	365
Arg	Ile	Ile	Trp	Lys	Ala	Leu	Lys	Pro	Leu	Leu	Val	Gly	Lys	Ile	Leu	370	375	380
Tyr	Thr	Pro	Asp	Thr	Pro	Ala	Thr	Arg	Gln	Val	Met	Ala	Glu	Val	Asn	385	390	395 400
Lys	Thr	Phe	Gln	Glu	Leu	Ala	Val	Phe	His	Asp	Leu	Glu	Gly	Met	Trp	405	410	415
Glu	Glu	Leu	Ser	Pro	Lys	Ile	Trp	Thr	Phe	Met	Glu	Asn	Ser	Gln	Glu	420	425	430
Met	Asp	Leu	Val	Arg	Met	Leu	Leu	Asp	Ser	Arg	Asp	Asn	Asp	His	Phe	435	440	445
Trp	Glu	Gln	Gln	Leu	Asp	Gly	Leu	Asp	Trp	Thr	Ala	Gln	Asp	Ile	Val	450	455	460
Ala	Phe	Leu	Ala	Lys	His	Pro	Glu	Asp	Val	Gln	Ser	Ser	Asn	Gly	Ser	465	470	475 480
Val	Tyr	Thr	Trp	Arg	Glu	Ala	Phe	Asn	Glu	Thr	Asn	Gln	Ala	Ile	Arg	485	490	495

Thr	Ile	Ser	Arg	Phe	Met	Glu	Cys	Val	Asn	Leu	Asn	Lys	Leu	Glu	Pro			
			500					505					510					
Ile	Ala	Thr	Glu	Val	Trp	Leu	Ile	Asn	Lys	Ser	Met	Glu	Leu	Leu	Asp			
			515				520					525						
Glu	Arg	Lys	Phe	Trp	Ala	Gly	Ile	Val	Phe	Thr	Gly	Ile	Thr	Pro	Gly			
			530				535				540							
Ser	Ile	Glu	Leu	Pro	His	His	Val	Lys	Tyr	Lys	Ile	Arg	Met	Asp	Ile			
545					550				555					560				
Asp	Asn	Val	Glu	Arg	Thr	Asn	Lys	Ile	Lys	Asp	Gly	Tyr	Trp	Asp	Pro			
				565					570					575				
Gly	Pro	Arg	Ala	Asp	Pro	Phe	Glu	Asp	Met	Arg	Tyr	Val	Trp	Gly	Gly			
			580					585					590					
Phe	Ala	Tyr	Leu	Arg	Asp	Val	Val	Glu	Gln	Ala	Ile	Ile	Arg	Val	Leu			
			595				600					605						
Thr	Gly	Thr	Glu	Lys	Lys	Thr	Gly	Val	Tyr	Met	Gln	Gln	Met	Pro	Tyr			
			610				615				620							
Pro	Cys	Tyr	Val	Asp	Asp	Ile	Phe	Leu	Arg	Val	Met	Ser	Arg	Ser	Met			
625					630				635					640				
Pro	Leu	Phe	Met	Thr	Leu	Ala	Trp	Ile	Tyr	Ser	Val	Ala	Val	Ile	Ile			
				645					650					655				
Lys	Gly	Ile	Val	Tyr	Glu	Lys	Glu	Ala	Arg	Leu	Lys	Glu	Thr	Met	Arg			
			660					665					670					
Ile	Met	Gly	Leu	Asp	Asn	Ser	Ile	Leu	Trp	Phe	Ser	Trp	Phe	Ile	Ser			
			675				680					685						
Ser	Leu	Ile	Pro	Leu	Leu	Val	Ser	Ala	Gly	Leu	Leu	Val	Val	Ile	Leu			
			690			695					700							
Lys	Leu	Gly	Asn	Leu	Leu	Pro	Tyr	Ser	Asp	Pro	Ser	Val	Val	Phe	Val			
705					710				715					720				
Phe	Leu	Ser	Val	Phe	Ala	Val	Val	Thr	Ile	Leu	Gln	Cys	Phe	Leu	Ile			
				725				730					735					
Ser	Thr	Leu	Phe	Ser	Arg	Ala	Asn	Leu	Ala	Ala	Ala	Cys	Gly	Gly	Ile			
			740				745					750						



Ile	Tyr	Phe	Thr	Leu	Tyr	Leu	Pro	Tyr	Val	Leu	Cys	Val	Ala	Trp	Gln	755	760	765
Asp	Tyr	Val	Gly	Phe	Thr	Leu	Lys	Ile	Phe	Ala	Ser	Leu	Leu	Ser	Pro	770	775	780
Val	Ala	Phe	Gly	Phe	Gly	Cys	Glu	Tyr	Phe	Ala	Leu	Phe	Glu	Glu	Gln	785	790	795
Gly	Ile	Gly	Val	Gln	Trp	Asp	Asn	Leu	Phe	Glu	Ser	Pro	Val	Glu	Glu	805	810	815
Asp	Gly	Phe	Asn	Leu	Thr	Thr	Ser	Ile	Ser	Met	Met	Leu	Phe	Asp	Thr	820	825	830
Phe	Leu	Tyr	Gly	Val	Met	Thr	Trp	Tyr	Ile	Glu	Ala	Val	Phe	Pro	Gly	835	840	845
Gln	Tyr	Gly	Ile	Pro	Arg	Pro	Trp	Tyr	Phe	Pro	Cys	Thr	Lys	Ser	Tyr	850	855	860
Trp	Phe	Gly	Glu	Glu	Ser	Asp	Glu	Lys	Ser	His	Pro	Gly	Ser	Asn	Gln	865	870	875
Lys	Arg	Met	Ser	Glu	Ile	Cys	Met	Glu	Glu	Glu	Pro	Thr	His	Leu	Lys	885	890	895
Leu	Gly	Val	Ser	Ile	Gln	Asn	Leu	Val	Lys	Val	Tyr	Arg	Asp	Gly	Met	900	905	910
Lys	Val	Ala	Val	Asp	Gly	Leu	Ala	Leu	Asn	Phe	Tyr	Glu	Gly	Gln	Ile	915	920	925
Thr	Ser	Phe	Leu	Gly	His	Asn	Gly	Ala	Gly	Lys	Thr	Thr	Thr	Met	Ser	930	935	940
Ile	Leu	Thr	Gly	Leu	Phe	Pro	Pro	Thr	Ser	Gly	Thr	Ala	Tyr	Ile	Leu	945	950	955
Gly	Lys	Asp	Ile	Arg	Ser	Glu	Met	Ser	Thr	Ile	Arg	Gln	Asn	Leu	Gly	965	970	975
Val	Cys	Pro	Gln	His	Asn	Val	Leu	Phe	Asp	Met	Leu	Thr	Val	Glu	Glu	980	985	990
His	Ile	Trp	Phe	Tyr	Ala	Arg	Leu	Lys	Gly	Leu	Ser	Glu	Lys	His	Val	995	1000	1005

Lys Ala Glu Met Glu Gln Met Ala Leu Asp Val Gly Leu Pro Ser Ser  
 1010 1015 1020

Lys Leu Lys Ser Lys Thr Ser Gln Leu Ser Gly Gly Met Gln Arg Lys  
 1025 1030 1035 1040

Leu Ser Val Ala Leu Ala Phe Val Gly Gly Ser Lys Val Val Ile Leu  
 1045 1050 1055

Asp Glu Pro Thr Ala Gly Val Asp Pro Tyr Ser Arg Arg Gly Ile Trp  
 1060 1065 1070

Glu Leu Leu Leu Lys Tyr Arg Gln Gly Arg Thr Ile Ile Leu Ser Thr  
 1075 1080 1085

His His Met Asp Glu Ala Asp Val Leu Gly Asp Arg Ile Ala Ile Ile  
 1090 1095 1100

Ser His Gly Lys Leu Cys Cys Val Gly Ser Ser Leu Phe Leu Lys Asn  
 1105 1110 1115 1120

Gln Leu Gly Thr Gly Tyr Tyr Leu Thr Leu Val Lys Lys Asp Val Glu  
 1125 1130 1135

Ser Ser Leu Ser Ser Cys Arg Asn Ser Ser Ser Thr Val Ser Tyr Leu  
 1140 1145 1150

Lys Lys Glu Asp Ser Val Ser Gln Ser Ser Ser Asp Ala Gly Leu Gly  
 1155 1160 1165

Ser Asp His Glu Ser Asp Thr Leu Thr Ile Asp Val Ser Ala Ile Ser  
 1170 1175 1180

Asn Leu Ile Arg Lys His Val Ser Glu Ala Arg Leu Val Glu Asp Ile  
 1185 1190 1195 1200

Gly His Glu Leu Thr Tyr Val Leu Pro Tyr Glu Ala Ala Lys Glu Gly  
 1205 1210 1215

Ala Phe Val Glu Leu Phe His Glu Ile Asp Asp Arg Leu Ser Asp Leu  
 1220 1225 1230

Gly Ile Ser Ser Tyr Gly Ile Ser Glu Thr Thr Leu Glu Glu Ile Phe  
 1235 1240 1245

Leu Lys Val Ala Glu Glu Ser Gly Val Asp Ala Glu Thr Ser Asp Gly  
 1250 1255 1260

Thr·Leu	Pro	Ala	Arg	Arg	Asn	Arg	Arg	Ala	Phe	Gly	Asp	Lys	Gln	Ser	
1265					1270				1275				1280		
Cys	Leu	Arg	Pro	Phe	Thr	Glu	Asp	Asp	Ala	Ala	Asp	Pro	Asn	Asp	Ser
			1285						1290				1295		
Asp	Ile	Asp	Pro	Glu	Ser	Arg	Glu	Thr	Asp	Leu	Leu	Ser	Gly	Met	Asp
			1300						1305				1310		
Gly	Lys	Gly	Ser	Tyr	Gln	Val	Lys	Gly	Trp	Lys	Leu	Thr	Gln	Gln	Gln
			1315						1320				1325		
Phe	Val	Ala	Leu	Leu	Trp	Lys	Arg	Leu	Leu	Ile	Ala	Arg	Arg	Ser	Arg
			1330						1335				1340		
Lys	Gly	Phe	Phe	Ala	Gln	Ile	Val	Leu	Pro	Ala	Val	Phe	Val	Cys	Ile
1345									1350				1355		1360
Ala	Leu	Val	Phe	Ser	Leu	Ile	Val	Pro	Pro	Phe	Gly	Lys	Tyr	Pro	Ser
									1365				1370		1375
Leu	Glu	Leu	Gln	Pro	Trp	Met	Tyr	Asn	Glu	Gln	Tyr	Thr	Phe	Val	Ser
			1380										1385		1390
Asn	Asp	Ala	Pro	Glu	Asp	Thr	Gly	Thr	Leu	Glu	Leu	Leu	Asn	Ala	Leu
			1395						1400				1405		
Thr	Lys	Asp	Pro	Gly	Phe	Gly	Thr	Arg	Cys	Met	Glu	Gly	Asn	Pro	Ile
			1410										1415		1420
Pro	Asp	Thr	Pro	Cys	Gln	Ala	Gly	Glu	Glu	Glu	Trp	Thr	Thr	Ala	Pro
1425													1430		1435
Val	Pro	Gln	Thr	Ile	Met	Asp	Leu	Phe	Gln	Asn	Gly	Asn	Trp	Thr	Met
									1445				1450		1455
Gln	Asn	Pro	Ser	Pro	Ala	Cys	Gln	Cys	Ser	Ser	Asp	Lys	Ile	Lys	Lys
			1460										1465		1470
Met	Leu	Pro	Val	Cys	Pro	Pro	Gly	Ala	Gly	Gly	Leu	Pro	Pro	Pro	Gln
			1475										1480		1485
Arg	Lys	Gln	Asn	Thr	Ala	Asp	Ile	Leu	Gln	Asp	Leu	Thr	Gly	Arg	Asn
			1490										1495		1500
Ile	Ser	Asp	Tyr	Leu	Val	Lys	Thr	Tyr	Val	Gln	Ile	Ile	Ala	Lys	Ser
1505													1510		1515
															1520

Leu Lys Asn Lys Ile Trp Val Asn Glu Phe Arg Tyr Gly Gly Phe Ser	1525	1530	1535
Leu Gly Val Ser Asn Thr Gln Ala Leu Pro Pro Ser Gln Glu Val Asn	1540	1545	1550
Asp Ala Ile Lys Gln Met Lys Lys His Leu Lys Leu Ala Lys Asp Ser	1555	1560	1565
Ser Ala Asp Arg Phe Leu Asn Ser Leu Gly Arg Phe Met Thr Gly Leu	1570	1575	1580
Asp Thr Arg Asn Asn Val Lys Val Trp Phe Asn Asn Lys Gly Trp His	1585	1590	1595
Ala Ile Ser Ser Phe Leu Asn Val Ile Asn Asn Ala Ile Leu Arg Ala	1605	1610	1615
Asn Leu Gln Lys Gly Glu Asn Pro Ser His Tyr Gly Ile Thr Ala Phe	1620	1625	1630
Asn His Pro Leu Asn Leu Thr Lys Gln Gln Leu Ser Glu Val Ala Leu	1635	1640	1645
Met Thr Thr Ser Val Asp Val Leu Val Ser Ile Cys Val Ile Phe Ala	1650	1655	1660
Met Ser Phe Val Pro Ala Ser Phe Val Val Phe Leu Ile Gln Glu Arg	1665	1670	1675
Val Ser Lys Ala Lys His Leu Gln Phe Ile Ser Gly Val Lys Pro Val	1685	1690	1695
Ile Tyr Trp Leu Ser Asn Phe Val Trp Asp Met Cys Asn Tyr Val Val	1700	1705	1710
Pro Ala Thr Leu Val Ile Ile Ile Phe Ile Cys Phe Gln Gln Lys Ser	1715	1720	1725
Tyr Val Ser Ser Thr Asn Leu Pro Val Leu Ala Leu Leu Leu Leu	1730	1735	1740
Tyr Gly Trp Ser Ile Thr Pro Leu Met Tyr Pro Ala Ser Phe Val Phe	1745	1750	1755
Lys Ile Pro Ser Thr Ala Tyr Val Val Leu Thr Ser Val Asn Leu Phe	1765	1770	1775

Ile Gly	Ile Asn Gly Ser Val Ala Thr Phe Val Leu Glu Leu Phe Thr	
1780	1785	1790
Asp Asn Lys Leu Asn Asn Ile Asn Asp Ile Leu Lys Ser Val Phe Leu		
1795	1800	1805
Ile Phe Pro His Phe Cys Leu Gly Arg Gly Leu Ile Asp Met Val Lys		
1810	1815	1820
Asn Gln Ala Met Ala Asp Ala Leu Glu Arg Phe Gly Glu Asn Arg Phe		
1825	1830	1835 1840
Val Ser Pro Leu Ser Trp Asp Leu Val Gly Arg Asn Leu Phe Ala Met		
1845	1850	1855
Ala Val Glu Gly Val Val Phe Phe Leu Ile Thr Val Leu Ile Gln Tyr		
1860	1865	1870
Arg Phe Phe Ile Arg Pro Arg Pro Val Asn Ala Lys Leu Ser Pro Leu		
1875	1880	1885
Asn Asp Glu Asp Glu Asp Val Arg Arg Glu Arg Gln Arg Ile Leu Asp		
1890	1895	1900
Gly Gly Gly Gln Asn Asp Ile Leu Glu Ile Lys Glu Leu Thr Lys Ile		
1905	1910	1915 1920
Tyr Arg Arg Lys Arg Lys Pro Ala Val Asp Arg Ile Cys Val Gly Ile		
1925	1930	1935
Pro Pro Gly Glu Cys Phe Gly Leu Leu Gly Val Asn Gly Ala Gly Lys		
1940	1945	1950
Ser Ser Thr Phe Lys Met Leu Thr Gly Asp Thr Thr Val Thr Arg Gly		
1955	1960	1965
Asp Ala Phe Leu Asn Lys Asn Ser Ile Leu Ser Asn Ile His Glu Val		
1970	1975	1980
His Gln Asn Met Gly Tyr Cys Pro Gln Phe Asp Ala Ile Thr Glu Leu		
1985	1990	1995 2000
Leu Thr Gly Arg Glu His Val Glu Phe Phe Ala Leu Leu Arg Gly Val		
2005	2010	2015
Pro Glu Lys Glu Val Gly Lys Val Gly Glu Trp Ala Ile Arg Lys Leu		
2020	2025	2030

Gly Leu Val Lys Tyr Gly Glu Lys Tyr Ala Gly Asn Tyr Ser Gly Gly  
 2035 2040 2045

Asn Lys Arg Lys Leu Ser Thr Ala Met Ala Leu Ile Gly Gly Pro Pro  
 2050 2055 2060

Val Val Phe Leu Asp Glu Pro Thr Thr Gly Met Asp Pro Lys Ala Arg  
 2065 2070 2075 2080

Arg Phe Leu Trp Asn Cys Ala Leu Ser Val Val Lys Glu Gly Arg Ser  
 2085 2090 2095

Val Val Leu Thr Ser His Ser Met Glu Glu Cys Glu Ala Leu Cys Thr  
 2100 2105 2110

Arg Met Ala Ile Met Val Asn Gly Arg Phe Arg Cys Leu Gly Ser Val  
 2115 2120 2125

Gln His Leu Lys Asn Arg Phe Gly Asp Gly Tyr Thr Ile Val Val Arg  
 2130 2135 2140

Ile Ala Gly Ser Asn Pro Asp Leu Lys Pro Val Gln Asp Phe Phe Gly  
 2145 2150 2155 2160

Leu Ala Phe Pro Gly Ser Val Leu Lys Glu Lys His Arg Asn Met Leu  
 2165 2170 2175

Gln Tyr Gln Leu Pro Ser Ser Leu Ser Ser Leu Ala Arg Ile Phe Ser  
 2180 2185 2190

Ile Leu Ser Gln Ser Lys Lys Arg Leu His Ile Glu Asp Tyr Ser Val  
 2195 2200 2205

Ser Gln Thr Thr Leu Asp Gln Val Phe Val Asn Phe Ala Lys Asp Gln  
 2210 2215 2220

Ser Asp Asp Asp His Leu Lys Asp Leu Ser Leu His Lys Asn Gln Thr  
 2225 2230 2235 2240

Val Val Asp Val Ala Val Leu Thr Ser Phe Leu Gln Asp Glu Lys Val  
 2245 2250 2255

Lys Glu Ser Tyr Val  
 2260

<210> 9

<211> 10474

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> (1)..(10474)

<223> All n's are unknown.

<400> 9

```
tctagaactg ggtaccagct gctagcaagc ttcggcacga gccgcagagc cgagccgacc 60
cttctctccc gggctgcggc agggcagggc ggggagctcc gcgcaccaac agagccgggt 120
ctcagggcgc tttgctcctt gttttttccc cggttctgtt ttctcccctt ctccggaagg 180
cttgtcaagg ggtaggagaa agagacgcaa acacaaaagt ggaaaacagt taatgaccag 240
ccacgggctg ccctgctgtg agctctggcc gctgccttcc agggctcccg agccacacgc 300
tgggcgctgt ggctgagggg acatggcttg ttggcctcag ctgaggttgc tgctgtggaa 360
gaacctcact ttcagaagaa gacaaacatg tcagctgtta ctggaagtgg cctggcctct 420
atztatcttc ctgatcctga tctctgttcg gctgagctac ccaccctatg aacaacatga 480
atgccatttt ccaaataaag ccatgccctc tgcaggaaca cttccttggg ttcaggggat 540
tatctgtaat gccacaacc cctgtttccg ttacccgact cctggggagg ctcccggagt 600
tggtggaaac tttaacaaat ccattgtggc tcgcctgttc tcagatgctc ggaggcttct 660
tttatacagc cagaaagaca ccagcatgaa ggacatgcgc aaagtctga gaacattaca 720
gcagatcaag aaatccagct caaacttgaa gcttcaagat ttcctggtgg acaatgaaac 780
cttctctggg ttcctatata acaacctctc tctcccaaag tctactgtgg acaagatgct 840
gagggctgat gtcattctcc acaaggtatt tttgcaaggc taccagttac atttgacaag 900
tctgtgcaat ggatcaaaat cagaagagat gattcaactt ggtgaccaag aagtttctga 960
gctttgtggc ctaccaaaag agaaactggc tgcagcagag cgagtacttc gttccaacat 1020
ggacatcctg aagccaatcc tgagaacact aaactctaca tctcccttcc cgagcaagga 1080
gctggctgaa gccacaaaaa cattgctgca tagtcttggg actctggccc aggagctgtt 1140
cagcatgaga agctggagtg acatgcgaca ggaggtgatg tttctgacca atgtgaacag 1200
ctccagctcc tccacccaaa tctaccaggc tgtgtctcgt attgtctgcg ggcattcccga 1260
gggagggggg ctgaagatca agtctctcaa ctggtatgag gacaacaact acaaagccct 1320
ctttggaggc aatggcactg aggaagatgc tgaaaccttc tatgacaact ctacaactcc 1380
ttactgcaat gatttgatga agaatttgga gtctagtcct ctttcccgca ttatctggaa 1440
agctctgaag ccgctgctcg ttgggaagat cctgtatata cctgacactc cagccacaag 1500
gcaggtcatg gctgaggtga acaagacctt ccaggaaactg gctgtgttcc atgatctgga 1560
aggcatgtgg gaggaactca gcccgaagat ctggaccttc atggagaaca gccaagaaat 1620
ggaccttgct cggatgctgt tggacagcag ggacaatgac cacttttggg aacagcagtt 1680
ggatggctta gattggacag cccaagacat cgtggcgttt ttggccaagc acccagagga 1740
tgtccagtc agtaatggtt ctgtgtacac ctggagagaa gctttcaacg agactaacca 1800
ggcaatccgg accatatctc gcttcatgga gtgtgtcaac ctgaacaagc tagaaccat 1860
agcaacagaa gtctggctca tcaacaagtc catggagctg ctggatgaga ggaagtctg 1920
ggctgggtatt gtgttactg gaattactcc aggcagcatt gagctgcccc atcatgtcaa 1980
gtacaagatc cgaatggaca ttgacaatgt ggagaggaca aataaaatca aggatgggta 2040
ctgggacctt ggtcctcgag ctgaccttct tgaggacatg tggtagctct gggggggctt 2100
cgcctacttg caggatgtgg tggagcaggc aatcatcagg gtgctgacgg gcaccgagaa 2160
gaaaactggg gtctatatgc aacagatgcc ctatccctgt tacgttgatg acatctttct 2220
gcgggtgatg agccggtcaa tgcccctctt catgacgctg gcctggattt actcagtggc 2280
tgtgatcatc aagggcacg tgtatgagaa ggaggcacgg ctgaaagaga ccatgcggat 2340
```

catgggcctg	gacaacagca	tactctggtt	tagctggttc	attagtagcc	tcattcctct	2400
tcttgtgagc	gctggcctgc	tagtgggtcat	cctgaagtta	ggaaacctgc	tgccctacag	2460
tgatcccagc	gtgggtgtttg	tcttcctgtc	cgtgttttgc	gtggtgacaa	tcctgcagtg	2520
cttcctgatt	agcacactct	tctccagagc	caacctggca	gcagcctgtg	ggggcatcat	2580
ctacttcacg	ctgtacctgc	cctacgtcct	gtgtgtggca	tggcaggact	acgtgggctt	2640
cacactcaag	atcttcgcta	gcctgctgtc	tcctgtggct	tttgggtttg	gctgtgagta	2700
ctttgccctt	tttgaggagc	agggcattgg	agtgcagtgg	gacaacctgt	ttgagagtcc	2760
tgtggaggaa	gatggcctca	atctcaccac	ttcgatctcc	atgatgctgt	ttgacacctt	2820
cctctatggg	gtgatgacct	ggtacattga	ggctgtcttt	ccaggccagt	acggaattcc	2880
caggccctgg	tattttcctt	gcaccaagtc	ctactggttt	ggcgaggaaa	gtgatgagaa	2940
gagccaccct	ggttccaacc	agaagagaat	gtcagaaatc	tgcatggagg	aggaacccac	3000
ccacttgaag	ctgggcgtgt	ccattcagaa	cctggtaaaa	gtctaccgag	atgggatgaa	3060
ggtggctgtc	gatggcctgg	caactgaattt	ttatgagggc	cagatcacct	ccttcctggg	3120
ccacaatgga	gcggggaaga	cgaccaccat	gtcaatcctg	accgggttgt	ttccccgcac	3180
ctcgggcacc	gcctacatcc	tgggaaaaga	cattcgctct	gagatgagca	ccatccggca	3240
gaacctgggg	gtctgtcccc	agcataacgt	gctgtttgac	atgctgactg	tcgaagaaca	3300
catctgggtc	tatgcccgct	tgaaagggct	ctctgagaag	cacgtgaagg	cggagatgga	3360
gcagatggcc	ctggatgttg	gtttgccatc	aagcaagctg	aaaagcaaaa	caagccagct	3420
gtcaggtgga	atgcagagaa	agctatctgt	ggccttggcc	tttgtcgggg	gatctaaggt	3480
tgtcattctg	gatgaacca	cagctgggtg	ggacccttac	tcccgcaggg	gaatatggga	3540
gctgctgctg	aaataccgac	aaggccgcac	cattattctc	tctacacacc	acatggatga	3600
agcggacgtc	ctgggggaca	ggattgccat	catctcccat	gggaagctgt	gctgtgtggg	3660
ctcctccctg	tttctgaaga	accagctggg	aacaggctac	tacctgacct	tggtcaagaa	3720
agatgtggaa	tcctccctca	gttcctgcag	aaacagtagt	agcactgtgt	catacctgaa	3780
aaaggaggac	agtgtttctc	agagcagttc	tgatgctggc	ctgggcagcg	accatgagag	3840
tgacacgctg	accatcgatg	tctctgctat	ctccaacctc	atcaggaagc	atgtgtctga	3900
agcccggctg	gtggaagaca	tagggcatga	gctgacctat	gtgctgcat	atgaagctgc	3960
taaggaggga	gcctttgtgg	aactctttca	tgagattgat	gaccggctct	cagacctggg	4020
catttctagt	tatggcatct	cagagacgac	cctggaagaa	atattcctca	aggtggccga	4080
agagagtggg	gtggatgctg	agacctcaga	tggtaccttg	ccagcaagac	gaaacaggcg	4140
ggccttcggg	gacaagcaga	gctgtcttcg	cccgttcact	gaagatgatg	ctgctgatcc	4200
aaatgattct	gacatagacc	cagaatccag	agagacagac	ttgctcagtg	ggatggatgg	4260
caaagggtcc	taccagggtga	aaggctggaa	acttacacag	caacagtttg	tggccctttt	4320
gtggaagaga	ctgctaattg	ccagacggag	tcggaaagga	ttttttgctc	agattgtctt	4380
gccagctgtg	tttgtctgca	ttgcccttgt	gttcagcctg	atcgtgccac	cctttggcaa	4440
gtaccccagc	ctggaacttc	agccctggat	gtacaacgaa	cagtacacat	ttgtcagcaa	4500
tgatgctcct	gaggacacgg	gaaccctgga	actcttaaac	gccctcacca	aagaccctgg	4560
cttcgggacc	cgctgtatgg	aaggaaacct	aatcccagac	acgccctgcc	aggcagggga	4620
ggaagagtgg	accactgccc	cagttcccca	gaccatcatg	gacctcttcc	agaatgggaa	4680
ctggacaatg	cagaaccttt	cacctgcatg	ccagtgtagc	agcgacaaaa	tcaagaagat	4740
gctgcctgtg	tgtccccag	gggcaggggg	gctgcctcct	ccacaaagaa	aacaaaacac	4800
tgagatatc	cttcaggacc	tgacaggaag	aaacatttcg	gattatctgg	tgaagacgta	4860
tgtgcagatc	atagccaaaa	gcttaaagaa	caagatctgg	gtgaatgagt	ttaggtatgg	4920
cggcttttcc	ctgggtgtca	gtaatactca	agcacttcct	ccgagtcaag	aagttaatga	4980
tgccatcaaa	caaatgaaga	aacacctaaa	gctggccaag	gacagttctg	cagatcgatt	5040
tctcaacagc	ttgggaagat	ttatgacagg	actggacacc	agaaataatg	tcaaggtgtg	5100
gttcaataac	aagggtgtgg	atgcaatcag	ctctttcctg	aatgtcatca	acaatgccat	5160
tctccggggc	aacctgcaaa	aggagagaaa	ccctagccat	tatggaatta	ctgctttcaa	5220



tcatccccctg	aatctcacca	agcagcagct	ctcagaggtg	gctctgatga	ccacatcagt	5280
ggatgtcctt	gtgtccatct	gtgtcatctt	tgcaatgtcc	ttcgtcccag	ccagctttgt	5340
cgtattcctg	atccaggagc	gggtcagcaa	agcaaaacac	ctgcagttca	tcagtggagt	5400
gaagcctgtc	atctactggc	tctctaattt	tgtctgggat	atgtgcaatt	acgttgtccc	5460
tgccacactg	gtcattatca	tcttcatctg	cttccagcag	aagtcctatg	tgtcctccac	5520
caatctgcct	gtgctagccc	ttctactttt	gctgtatggg	tggcfaatca	cacctctcat	5580
gtaccagccc	tcctttgtgt	tcaagatccc	cagcacagcc	tatgtgggtg	tcaccagcgt	5640
gaacctcttc	attggcatta	atggcagcgt	ggccaccttt	gtgctggagc	tgttcaccga	5700
caataagctg	aataatatca	atgatatcct	gaagtcctgt	ttcttgatct	ttccacattt	5760
ttgcctggga	cgagggtcga	tcgacatggg	gaaaaaccag	gcaatggctg	atgccctgga	5820
aagggttggg	gagaatcgct	ttgtgtcacc	attatcttgg	gacttgggtg	gacgaaacct	5880
cttcgccatg	gccgtggaag	gggtgggtgt	cttctcatt	actgttctga	tccagtacag	5940
attcttcatc	aggccagac	ctgtaaatgc	aaagctatct	cctctgaatg	atgaagatga	6000
agatgtgagg	cgggaaagac	agagaattct	tgatgggtga	ggccagaatg	acatcttaga	6060
aatcaaggag	ttgacgaaga	tatatagaag	gaagcgggaag	cctgctgttg	acaggatttg	6120
cgtgggcatt	cctcctgggt	agtgccttgg	gctcctggga	gttaatgggg	ctggaaaatc	6180
atcaactttc	aagatgttaa	caggagatac	cactgttacc	agaggagatg	ctttccttaa	6240
caaaaatagt	atcttatcaa	acatccatga	agtacatcag	aacatgggct	actgccctca	6300
gtttgatgcc	atcacagagc	tgttgactgg	gagagaacac	gtggagtctt	ttgccctttt	6360
gagaggagtc	ccagagaaaag	aagttggcaa	ggttgggtgag	tgggcgattc	ggaaactggg	6420
cctcgtgaag	tatggagaaa	aatatgctgg	taactatagt	ggaaggcaaca	aacgcaagct	6480
ctctacagcc	atggctttga	tcggcggggc	tcctgtgggt	tttctggatg	aaccaccac	6540
aggcatggat	cccaaagccc	ggcggttctt	gtggaattgt	gccctaagtg	ttgtcaagga	6600
ggggagatca	gtagtgtta	catctcatag	tatggaagaa	tgtgaagctc	tttgactag	6660
gatggcaatc	atgggtcaatg	gaaggttcag	gtgccttggc	agtgtccagc	atctaaaaaa	6720
taggtttgga	gatgggttata	caatagtgtg	acgaatagca	gggtccaacc	cggacctgaa	6780
gcctgtccag	gatttctttg	gacttgcatt	tcctggaagt	gttctaaaag	agaaacaccg	6840
gaacatgcta	caataccagc	ttccatcttc	attatcttct	ctggccagga	tattcagcat	6900
cctctcccag	agcaaaaagc	gactccacat	agaagactac	tctgtttctc	agacaacact	6960
tgaccaagta	tttgtgaact	ttgccaagga	ccaaagtgat	gatgaccact	taaaagacct	7020
ctcattacac	aaaaaccaga	cagtagtgga	cgttgcagtt	ctcacatctt	ttctacagga	7080
tgagaaaagt	aaagaaagct	atgtatgaag	aatcctgttc	atacgggggtg	gctgaaaagta	7140
aagagggaact	agactttcct	ttgcaccatg	tgaagtgttg	tggagaaaag	agccagaagt	7200
tgatgtggga	agaagtaaac	tggatactgt	actgatacta	ttcaatgcaa	tgcaattcaa	7260
tgcaatgaaa	acaaaattcc	attacagggg	cagtgccttt	gtagcctatg	tcttgtatgg	7320
ctctcaagtg	aaagacttga	atttagtttt	ttacctatac	ctatgtgaaa	ctctattatg	7380
gaacccaatg	gacatatggg	tttgaactca	cacttttttt	ttttttttgt	tcctgtgtat	7440
tctcattggg	gttgcaacaa	taattcatca	agtaatcatg	gccagcgatt	attgatcaaa	7500
atcaaaaaggt	aatgcacatc	ctcattcact	aagccatgcc	atgccagga	gactggtttc	7560
ccggtgacac	atccattgct	ggcaatgagt	gtgccagagt	tattagtgcc	aagtttttca	7620
gaaagtgtga	agcaccatgg	tgtgtcatgc	tcacttttgt	gaaagctgct	ctgctcagag	7680
tctatcaaca	ttgaatatca	gttgacagaa	tgggtgccatg	cgtggctaac	atcctgcttt	7740
gattccctct	gataagctgt	tctgggtggca	gtaacatgca	acaaaaatgt	gggtgtctct	7800
aggcacggga	aacttgggtc	cattgttata	ttgtcctatg	cttcgagcca	tgggtctaca	7860
gggtcatcct	tatgagactc	ttaaatatac	ttagatcctg	gtaagaggca	aagaatcaac	7920
agccaaaactg	ctggggctgc	aagctgctga	agccagggca	tgggattaaa	gagattgtgc	7980
gttcaaacct	agggaaagcct	gtgcccattt	gtcctgactg	tctgctaaca	tgggtacactg	8040
catctcaaga	tgtttatctg	acacaagtgt	attatttctg	gctttttgaa	ttaatctaga	8100

```

aaatgaaaag atggagttgt attttgacaa aaatgtttgt actttttaat gttatttgga 8160
attttaagtt ctatcagtga cttctgaatc cttagaatgg cctctttgta gaaccctgtg 8220
gtatagagga gtatggccac tgccccacta tttttatttt cttatgtaag tttgcatatc 8280
agtcatgact agtgcctaga aagcaatgtg atggtcagga tctcatgaca ttatatttga 8340
gtttctttca gatcatttag gatactctta atctcacttc atcaatcaaa tattttttga 8400
gtgtatgctg tagctgaaag agtatgtacg tacgtataag actagagaga tattaagtct 8460
cagtacactt cctgtgccat gttattcagc tctctggttt acaaataatag gttgtcttgt 8520
ggttgtagga gccactgta acaatattgg gcagcctttt tttttttttt ttaattgcaa 8580
caatgcaaaa gccaaagaaag tataagggtc acaagtttaa acaatgaatt cttcaacagg 8640
gaaaacagct agcttgaaaa cttgctgaaa aacacaactt gtgtttatgg catttagtac 8700
cttcaaataa ttggctttgc agatattgga taccaccatta aatctgacag tctcaaattt 8760
ttcatctctt caatcactag tcaagaaaaa tataaaaaaca acaaatactt ccatatggag 8820
catttttcag agttttctaa cccagtctta tttttctagt cagtaaacat ttgtaaaaat 8880
actgtttcac taatacttac tgttaactgt cttgagagaa aagaaaaata tgagagaact 8940
attgtttggg gaagttcaag tgatctttca atatcattac taacttcttc cactttttcc 9000
aaaatttgaa tattaacgct aaagggtgta gacttcagat ttcaaattaa tctttctata 9060
ttttttaaat ttacagaata ttatataacc cactgctgaa aaagaaaaaa atgattgttt 9120
tagaagttaa agtcaatatt gatttttaaat ataagtaatg aaggcatatt tccaataact 9180
agtgatatgg catcgttgca atttacagta tcttcaaaaa tacagaattt atagaataat 9240
ttctcctcat ttaatatttt tcaaaatcaa agttatgggt tcctcatttt actaaaatcg 9300
tattctaatt cttcattata gtaaatctat gagcaactcc ttacttcggt tcctctgatt 9360
tcaaggccat attttaaaaa atcaaaaggc actgtgaact attttgaaga aaacacgaca 9420
ttttaataca gattgaaagg acctcttctg aagctagaaa caatctatag ttatacatct 9480
tcattaatac tgtgttacct tttaaaatag taatttttta cattttcctg tgtaaaccta 9540
attgtggtag aaattttttac caactctata ctcaatcaag caaaatttct gtatattccc 9600
tgtggaatgt acctatgtga gtttcagaaa ttctcaaaat acgtgttcaa aaatttctgc 9660
ttttgcatct ttgggacacc tcagaaaact tattaacaac tgtgaatatg agaaatacag 9720
aagaaaaata taagccctct atacataaat gccagcaca attcattgtt aaaaaacaac 9780
caaacctcac actactgtat ttcattatct gtactgaaag caaatgcttt gtgactatta 9840
aatgttgcac atcattcatt cactgtatag taatcattga cttaaagccat ttgctgtgtt 9900
ttcttcttgt ggntgnatat atcaggtaaa atattttcca aagagccatg tgtcatgtaa 9960
tactgaaccc tttgatattg agacattaat ttggaccctt ggtattatct actagaataa 10020
tgtaatactg nagaaatatt gctctaattc tttcaaaatg gtgcatcccc cttaaaangt 10080
tctattttcca taaggattta gcttgcttat cccttcttat accctaagat gaagctgttt 10140
ttgtgctctt tggtcatcat tggccctcat tccaagcact ttacgctgtc tgtaatggga 10200
tctatttttg cactggaata tctgagaatt gcaaaaactag acaaaaagttt cacaacagat 10260
ttctaagtta aatcattttc attaaaagga aaaaagaaaa aaaattttgt atgtcaataa 10320
ctttatatga agtattaaaa tgcataattc tatgttgtaa tataatgagt cacaaaaata 10380
agctgtgaca gttctgttaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 10440
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 10474

```

<210> 10

<211> 2261

<212> PRT

<213> Homo sapiens

<400> 10

Met Ala Cys Trp Pro Gln Leu Arg Leu Leu Leu Trp Lys Asn Leu Thr

1	5	10	15
Phe Arg Arg Arg Gln Thr Cys Gln Leu Leu Leu Glu Val Ala Trp Pro	20	25	30
Leu Phe Ile Phe Leu Ile Leu Ile Ser Val Arg Leu Ser Tyr Pro Pro	35	40	45
Tyr Glu Gln His Glu Cys His Phe Pro Asn Lys Ala Met Pro Ser Ala	50	55	60
Gly Thr Leu Pro Trp Val Gln Gly Ile Ile Cys Asn Ala Asn Asn Pro	65	70	75
Cys Phe Arg Tyr Pro Thr Pro Gly Glu Ala Pro Gly Val Val Gly Asn	85	90	95
Phe Asn Lys Ser Ile Val Ala Arg Leu Phe Ser Asp Ala Arg Arg Leu	100	105	110
Leu Leu Tyr Ser Gln Lys Asp Thr Ser Met Lys Asp Met Arg Lys Val	115	120	125
Leu Arg Thr Leu Gln Gln Ile Lys Lys Ser Ser Ser Asn Leu Lys Leu	130	135	140
Gln Asp Phe Leu Val Asp Asn Glu Thr Phe Ser Gly Phe Leu Tyr His	145	150	155
Asn Leu Ser Leu Pro Lys Ser Thr Val Asp Lys Met Leu Arg Ala Asp	165	170	175
Val Ile Leu His Lys Val Phe Leu Gln Gly Tyr Gln Leu His Leu Thr	180	185	190
Ser Leu Cys Asn Gly Ser Lys Ser Glu Glu Met Ile Gln Leu Gly Asp	195	200	205
Gln Glu Val Ser Glu Leu Cys Gly Leu Pro Lys Glu Lys Leu Ala Ala	210	215	220
Ala Glu Arg Val Leu Arg Ser Asn Met Asp Ile Leu Lys Pro Ile Leu	225	230	235
Arg Thr Leu Asn Ser Thr Ser Pro Phe Pro Ser Lys Glu Leu Ala Glu	245	250	255
Ala Thr Lys Thr Leu Leu His Ser Leu Gly Thr Leu Ala Gln Glu Leu			

260	265	270
Phe Ser Met Arg Ser Trp Ser Asp Met Arg Gln Glu Val Met Phe Leu		
275	280	285
Thr Asn Val Asn Ser Ser Ser Ser Ser Thr Gln Ile Tyr Gln Ala Val		
290	295	300
Ser Arg Ile Val Cys Gly His Pro Glu Gly Gly Gly Leu Lys Ile Lys		
305	310	315 320
Ser Leu Asn Trp Tyr Glu Asp Asn Asn Tyr Lys Ala Leu Phe Gly Gly		
	325	330 335
Asn Gly Thr Glu Glu Asp Ala Glu Thr Phe Tyr Asp Asn Ser Thr Thr		
	340	345 350
Pro Tyr Cys Asn Asp Leu Met Lys Asn Leu Glu Ser Ser Pro Leu Ser		
	355	360 365
Arg Ile Ile Trp Lys Ala Leu Lys Pro Leu Leu Val Gly Lys Ile Leu		
	370	375 380
Tyr Thr Pro Asp Thr Pro Ala Thr Arg Gln Val Met Ala Glu Val Asn		
385	390	395 400
Lys Thr Phe Gln Glu Leu Ala Val Phe His Asp Leu Glu Gly Met Trp		
	405	410 415
Glu Glu Leu Ser Pro Lys Ile Trp Thr Phe Met Glu Asn Ser Gln Glu		
	420	425 430
Met Asp Leu Val Arg Met Leu Leu Asp Ser Arg Asp Asn Asp His Phe		
	435	440 445
Trp Glu Gln Gln Leu Asp Gly Leu Asp Trp Thr Ala Gln Asp Ile Val		
	450	455 460
Ala Phe Leu Ala Lys His Pro Glu Asp Val Gln Ser Ser Asn Gly Ser		
465	470	475 480
Val Tyr Thr Trp Arg Glu Ala Phe Asn Glu Thr Asn Gln Ala Ile Arg		
	485	490 495
Thr Ile Ser Arg Phe Met Glu Cys Val Asn Leu Asn Lys Leu Glu Pro		
	500	505 510
Ile Ala Thr Glu Val Trp Leu Ile Asn Lys Ser Met Glu Leu Leu Asp		

515		520		525
Glu Arg Lys Phe Trp Ala Gly Ile Val Phe Thr Gly Ile Thr Pro Gly				
530		535		540
Ser Ile Glu Leu Pro His His Val Lys Tyr Lys Ile Arg Met Asp Ile				
545		550		555 560
Asp Asn Val Glu Arg Thr Asn Lys Ile Lys Asp Gly Tyr Trp Asp Pro				
	565		570	575
Gly Pro Arg Ala Asp Pro Phe Glu Asp Met Trp Tyr Val Trp Gly Gly				
	580		585	590
Phe Ala Tyr Leu Gln Asp Val Val Glu Gln Ala Ile Ile Arg Val Leu				
	595		600	605
Thr Gly Thr Glu Lys Lys Thr Gly Val Tyr Met Gln Gln Met Pro Tyr				
	610		615	620
Pro Cys Tyr Val Asp Asp Ile Phe Leu Arg Val Met Ser Arg Ser Met				
	625		630	635 640
Pro Leu Phe Met Thr Leu Ala Trp Ile Tyr Ser Val Ala Val Ile Ile				
		645		650 655
Lys Gly Ile Val Tyr Glu Lys Glu Ala Arg Leu Lys Glu Thr Met Arg				
	660		665	670
Ile Met Gly Leu Asp Asn Ser Ile Leu Trp Phe Ser Trp Phe Ile Ser				
	675		680	685
Ser Leu Ile Pro Leu Leu Val Ser Ala Gly Leu Leu Val Val Ile Leu				
	690		695	700
Lys Leu Gly Asn Leu Leu Pro Tyr Ser Asp Pro Ser Val Val Phe Val				
	705		710	715 720
Phe Leu Ser Val Phe Ala Val Val Thr Ile Leu Gln Cys Phe Leu Ile				
		725		730 735
Ser Thr Leu Phe Ser Arg Ala Asn Leu Ala Ala Ala Cys Gly Gly Ile				
	740		745	750
Ile Tyr Phe Thr Leu Tyr Leu Pro Tyr Val Leu Cys Val Ala Trp Gln				
	755		760	765
Asp Tyr Val Gly Phe Thr Leu Lys Ile Phe Ala Ser Leu Leu Ser Pro				

770		775		780
Val Ala Phe Gly Phe Gly Cys Glu Tyr Phe Ala Leu Phe Glu Glu Gln				
785		790		800
Gly Ile Gly Val Gln Trp Asp Asn Leu Phe Glu Ser Pro Val Glu Glu				
	805		810	815
Asp Gly Phe Asn Leu Thr Thr Ser Ile Ser Met Met Leu Phe Asp Thr				
	820		825	830
Phe Leu Tyr Gly Val Met Thr Trp Tyr Ile Glu Ala Val Phe Pro Gly				
	835		840	845
Gln Tyr Gly Ile Pro Arg Pro Trp Tyr Phe Pro Cys Thr Lys Ser Tyr				
	850		855	860
Trp Phe Gly Glu Glu Ser Asp Glu Lys Ser His Pro Gly Ser Asn Gln				
865		870		880
Lys Arg Met Ser Glu Ile Cys Met Glu Glu Glu Pro Thr His Leu Lys				
	885		890	895
Leu Gly Val Ser Ile Gln Asn Leu Val Lys Val Tyr Arg Asp Gly Met				
	900		905	910
Lys Val Ala Val Asp Gly Leu Ala Leu Asn Phe Tyr Glu Gly Gln Ile				
	915		920	925
Thr Ser Phe Leu Gly His Asn Gly Ala Gly Lys Thr Thr Thr Met Ser				
	930		935	940
Ile Leu Thr Gly Leu Phe Pro Pro Thr Ser Gly Thr Ala Tyr Ile Leu				
945		950		960
Gly Lys Asp Ile Arg Ser Glu Met Ser Thr Ile Arg Gln Asn Leu Gly				
	965		970	975
Val Cys Pro Gln His Asn Val Leu Phe Asp Met Leu Thr Val Glu Glu				
	980		985	990
His Ile Trp Phe Tyr Ala Arg Leu Lys Gly Leu Ser Glu Lys His Val				
	995		1000	1005
Lys Ala Glu Met Glu Gln Met Ala Leu Asp Val Gly Leu Pro Ser Ser				
1010		1015		1020
Lys Leu Lys Ser Lys Thr Ser Gln Leu Ser Gly Gly Met Gln Arg Lys				

1025	1030	1035	1040
Leu Ser Val Ala Leu Ala Phe Val Gly Gly Ser Lys Val Val Ile Leu			
1045	1050	1055	
Asp Glu Pro Thr Ala Gly Val Asp Pro Tyr Ser Arg Arg Gly Ile Trp			
1060	1065	1070	
Glu Leu Leu Leu Lys Tyr Arg Gln Gly Arg Thr Ile Ile Leu Ser Thr			
1075	1080	1085	
His His Met Asp Glu Ala Asp Val Leu Gly Asp Arg Ile Ala Ile Ile			
1090	1095	1100	
Ser His Gly Lys Leu Cys Cys Val Gly Ser Ser Leu Phe Leu Lys Asn			
1105	1110	1115	1120
Gln Leu Gly Thr Gly Tyr Tyr Leu Thr Leu Val Lys Lys Asp Val Glu			
1125	1130	1135	
Ser Ser Leu Ser Ser Cys Arg Asn Ser Ser Ser Thr Val Ser Tyr Leu			
1140	1145	1150	
Lys Lys Glu Asp Ser Val Ser Gln Ser Ser Ser Asp Ala Gly Leu Gly			
1155	1160	1165	
Ser Asp His Glu Ser Asp Thr Leu Thr Ile Asp Val Ser Ala Ile Ser			
1170	1175	1180	
Asn Leu Ile Arg Lys His Val Ser Glu Ala Arg Leu Val Glu Asp Ile			
1185	1190	1195	1200
Gly His Glu Leu Thr Tyr Val Leu Pro Tyr Glu Ala Ala Lys Glu Gly			
1205	1210	1215	
Ala Phe Val Glu Leu Phe His Glu Ile Asp Asp Arg Leu Ser Asp Leu			
1220	1225	1230	
Gly Ile Ser Ser Tyr Gly Ile Ser Glu Thr Thr Leu Glu Glu Ile Phe			
1235	1240	1245	
Leu Lys Val Ala Glu Glu Ser Gly Val Asp Ala Glu Thr Ser Asp Gly			
1250	1255	1260	
Thr Leu Pro Ala Arg Arg Asn Arg Arg Ala Phe Gly Asp Lys Gln Ser			
1265	1270	1275	1280
Cys Leu Arg Pro Phe Thr Glu Asp Asp Ala Ala Asp Pro Asn Asp Ser			

1285	1290	1295
Asp Ile Asp Pro Glu Ser Arg Glu Thr Asp Leu Leu Ser Gly Met Asp		
1300	1305	1310
Gly Lys Gly Ser Tyr Gln Val Lys Gly Trp Lys Leu Thr Gln Gln Gln		
1315	1320	1325
Phe Val Ala Leu Leu Trp Lys Arg Leu Leu Ile Ala Arg Arg Ser Arg		
1330	1335	1340
Lys Gly Phe Phe Ala Gln Ile Val Leu Pro Ala Val Phe Val Cys Ile		
1345	1350	1355 1360
Ala Leu Val Phe Ser Leu Ile Val Pro Pro Phe Gly Lys Tyr Pro Ser		
1365	1370	1375
Leu Glu Leu Gln Pro Trp Met Tyr Asn Glu Gln Tyr Thr Phe Val Ser		
1380	1385	1390
Asn Asp Ala Pro Glu Asp Thr Gly Thr Leu Glu Leu Leu Asn Ala Leu		
1395	1400	1405
Thr Lys Asp Pro Gly Phe Gly Thr Arg Cys Met Glu Gly Asn Pro Ile		
1410	1415	1420
Pro Asp Thr Pro Cys Gln Ala Gly Glu Glu Glu Trp Thr Thr Ala Pro		
1425	1430	1435 1440
Val Pro Gln Thr Ile Met Asp Leu Phe Gln Asn Gly Asn Trp Thr Met		
1445	1450	1455
Gln Asn Pro Ser Pro Ala Cys Gln Cys Ser Ser Asp Lys Ile Lys Lys		
1460	1465	1470
Met Leu Pro Val Cys Pro Pro Gly Ala Gly Gly Leu Pro Pro Pro Gln		
1475	1480	1485
Arg Lys Gln Asn Thr Ala Asp Ile Leu Gln Asp Leu Thr Gly Arg Asn		
1490	1495	1500
Ile Ser Asp Tyr Leu Val Lys Thr Tyr Val Gln Ile Ile Ala Lys Ser		
1505	1510	1515 1520
Leu Lys Asn Lys Ile Trp Val Asn Glu Phe Arg Tyr Gly Gly Phe Ser		
1525	1530	1535
Leu Gly Val Ser Asn Thr Gln Ala Leu Pro Pro Ser Gln Glu Val Asn		



1540	1545	1550
Asp Ala Ile Lys Gln Met Lys Lys His Leu Lys Leu Ala Lys Asp Ser		
1555	1560	1565
Ser Ala Asp Arg Phe Leu Asn Ser Leu Gly Arg Phe Met Thr Gly Leu		
1570	1575	1580
Asp Thr Arg Asn Asn Val Lys Val Trp Phe Asn Asn Lys Gly Trp His		
1585	1590	1595
1600		
Ala Ile Ser Ser Phe Leu Asn Val Ile Asn Asn Ala Ile Leu Arg Ala		
1605	1610	1615
Asn Leu Gln Lys Gly Glu Asn Pro Ser His Tyr Gly Ile Thr Ala Phe		
1620	1625	1630
Asn His Pro Leu Asn Leu Thr Lys Gln Gln Leu Ser Glu Val Ala Leu		
1635	1640	1645
Met Thr Thr Ser Val Asp Val Leu Val Ser Ile Cys Val Ile Phe Ala		
1650	1655	1660
Met Ser Phe Val Pro Ala Ser Phe Val Val Phe Leu Ile Gln Glu Arg		
1665	1670	1675
1680		
Val Ser Lys Ala Lys His Leu Gln Phe Ile Ser Gly Val Lys Pro Val		
1685	1690	1695
Ile Tyr Trp Leu Ser Asn Phe Val Trp Asp Met Cys Asn Tyr Val Val		
1700	1705	1710
Pro Ala Thr Leu Val Ile Ile Ile Phe Ile Cys Phe Gln Gln Lys Ser		
1715	1720	1725
Tyr Val Ser Ser Thr Asn Leu Pro Val Leu Ala Leu Leu Leu Leu		
1730	1735	1740
Tyr Gly Trp Ser Ile Thr Pro Leu Met Tyr Pro Ala Ser Phe Val Phe		
1745	1750	1755
1760		
Lys Ile Pro Ser Thr Ala Tyr Val Val Leu Thr Ser Val Asn Leu Phe		
1765	1770	1775
Ile Gly Ile Asn Gly Ser Val Ala Thr Phe Val Leu Glu Leu Phe Thr		
1780	1785	1790
Asp Asn Lys Leu Asn Asn Ile Asn Asp Ile Leu Lys Ser Val Phe Leu		

1795	1800	1805
Ile Phe Pro His Phe Cys Leu Gly Arg Gly Leu Ile Asp Met Val Lys		
1810	1815	1820
Asn Gln Ala Met Ala Asp Ala Leu Glu Arg Phe Gly Glu Asn Arg Phe		
1825	1830	1835 1840
Val Ser Pro Leu Ser Trp Asp Leu Val Gly Arg Asn Leu Phe Ala Met		
1845	1850	1855
Ala Val Glu Gly Val Val Phe Phe Leu Ile Thr Val Leu Ile Gln Tyr		
1860	1865	1870
Arg Phe Phe Ile Arg Pro Arg Pro Val Asn Ala Lys Leu Ser Pro Leu		
1875	1880	1885
Asn Asp Glu Asp Glu Asp Val Arg Arg Glu Arg Gln Arg Ile Leu Asp		
1890	1895	1900
Gly Gly Gly Gln Asn Asp Ile Leu Glu Ile Lys Glu Leu Thr Lys Ile		
1905	1910	1915 1920
Tyr Arg Arg Lys Arg Lys Pro Ala Val Asp Arg Ile Cys Val Gly Ile		
1925	1930	1935
Pro Pro Gly Glu Cys Phe Gly Leu Leu Gly Val Asn Gly Ala Gly Lys		
1940	1945	1950
Ser Ser Thr Phe Lys Met Leu Thr Gly Asp Thr Thr Val Thr Arg Gly		
1955	1960	1965
Asp Ala Phe Leu Asn Lys Asn Ser Ile Leu Ser Asn Ile His Glu Val		
1970	1975	1980
His Gln Asn Met Gly Tyr Cys Pro Gln Phe Asp Ala Ile Thr Glu Leu		
1985	1990	1995 2000
Leu Thr Gly Arg Glu His Val Glu Phe Phe Ala Leu Leu Arg Gly Val		
2005	2010	2015
Pro Glu Lys Glu Val Gly Lys Val Gly Glu Trp Ala Ile Arg Lys Leu		
2020	2025	2030
Gly Leu Val Lys Tyr Gly Glu Lys Tyr Ala Gly Asn Tyr Ser Gly Gly		
2035	2040	2045
Asn Lys Arg Lys Leu Ser Thr Ala Met Ala Leu Ile Gly Gly Pro Pro		

2050	2055	2060
Val Val Phe Leu Asp Glu Pro Thr Thr Gly Met Asp Pro Lys Ala Arg		
2065	2070	2075 2080
Arg Phe Leu Trp Asn Cys Ala Leu Ser Val Val Lys Glu Gly Arg Ser		
2085	2090	2095
Val Val Leu Thr Ser His Ser Met Glu Glu Cys Glu Ala Leu Cys Thr		
2100	2105	2110
Arg Met Ala Ile Met Val Asn Gly Arg Phe Arg Cys Leu Gly Ser Val		
2115	2120	2125
Gln His Leu Lys Asn Arg Phe Gly Asp Gly Tyr Thr Ile Val Val Arg		
2130	2135	2140
Ile Ala Gly Ser Asn Pro Asp Leu Lys Pro Val Gln Asp Phe Phe Gly		
2145	2150	2155 2160
Leu Ala Phe Pro Gly Ser Val Leu Lys Glu Lys His Arg Asn Met Leu		
2165	2170	2175
Gln Tyr Gln Leu Pro Ser Ser Leu Ser Ser Leu Ala Arg Ile Phe Ser		
2180	2185	2190
Ile Leu Ser Gln Ser Lys Lys Arg Leu His Ile Glu Asp Tyr Ser Val		
2195	2200	2205
Ser Gln Thr Thr Leu Asp Gln Val Phe Val Asn Phe Ala Lys Asp Gln		
2210	2215	2220
Ser Asp Asp Asp His Leu Lys Asp Leu Ser Leu His Lys Asn Gln Thr		
2225	2230	2235 2240
Val Val Asp Val Ala Val Leu Thr Ser Phe Leu Gln Asp Glu Lys Val		
2245	2250	2255
Lys Glu Ser Tyr Val		
2260		

<210> 11

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: ABC1  
amplification primer

<400> 11  
cctctcatta cacaaaaacc agac

24

<210> 12  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: ABC1  
amplification primer

<400> 12  
gctttctttc acttctcatc ctg

23

<210> 13  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: ABC1 RT-PCR  
primer

<400> 13  
tccttgagggt caggggatta tc

22

<210> 14  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: ABC1 RT-PCR  
primer

<400> 14  
caatgttttt gtggcttcgg c

21

<210> 15  
<211> 40  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: ABC1 RT-PCR  
primer

<400> 15  
agtcgagctc caaacatgtc agctgttact ggaagtggcc

40

<210> 16  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: ABC1 RT-PCR  
primer

<400> 16  
tctctggatt ctgggtctat gtcag

25

<210> 17  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: ABC1 RT-PCR  
primer

<400> 17  
gggagccttt gtggaactct ttc

23

<210> 18  
<211> 41  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: ABC1 RT-PCR  
primer

<400> 18  
actggtcgac cattgaattg cattgcattg aatagtatca g

41

<210> 19  
<211> 19  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: ABC1  
sequencing primer

<400> 19  
tttcctggtg gacaatgaa

19

<210> 20  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: ABC1  
sequencing primer

<400> 20  
agtgacatgc gacaggag

18

<210> 21  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: ABC1  
sequencing primer

<400> 21  
gatctggaag gcatgtgg

18

<210> 22  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: ABC1  
sequencing primer

<400> 22  
ccaggcagca ttgagctg

18

<210> 23  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: ABC1  
sequencing primer

<400> 23

ggcctggaca acagcata

18

<210> 24

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: ABC1  
sequencing primer

<400> 24

ggacaacctg ttgagagt

19

<210> 25

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: ABC1  
sequencing primer

<400> 25

aagacgacca ccatgtca

18

<210> 26

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: ABC1  
sequencing primer

<400> 26

atatgggagc tgctgctg

18

<210> 27

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: ABC1  
sequencing primer

<400> 27  
gggcatgagc tgacctatgt gctg

24

<210> 28  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: ABC1  
sequencing primer

<400> 28  
aagagactgc taattgcc

18

<210> 29  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: ABC1  
sequencing primer

<400> 29  
agcgacaaaa tcaagaag

18

<210> 30  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: ABC1  
sequencing primer

<400> 30  
tggcatgcaa tcagctct

18

<210> 31  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>



<223> Description of Artificial Sequence: ABC1  
sequencing primer

<400> 31  
tcctccacca atctgcct

18

<210> 32  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: ABC1  
sequencing primer

<400> 32  
ttcttcctca ttactgtt

18

<210> 33  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: ABC1  
sequencing primer

<400> 33  
gatgccatca cagagctg

18

<210> 34  
<211> 17  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: ABC1  
sequencing primer

<400> 34  
agtgtccagc atctaaa

17

<210> 35  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: ABC1  
sequencing primer

<400> 35

caaagttcac aaatactt

18

<210> 36

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: ABC1  
sequencing primer

<400> 36

cttagggcac aattccaca

19

<210> 37

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: ABC1  
sequencing primer

<400> 37

tgaaagttga tgattttc

18

<210> 38

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: ABC1  
sequencing primer

<400> 38

tttttcacca tgtcgatga

19

<210> 39

<211> 17

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: ABC1  
sequencing primer

<400> 39  
ctccactgat gaactgc

17

<210> 40  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: ABC1  
sequencing primer

<400> 40  
gtttcttcat ttgtttga

18

<210> 41  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: ABC1  
sequencing primer

<400> 41  
agggcgtgtc tgggattg

18

<210> 42  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: ABC1  
sequencing primer

<400> 42  
cagaatcatt tggatcag

18

<210> 43  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: ABC1  
sequencing primer

<400> 43

catcagaact gctctgag

18

<210> 44

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: ABC1  
sequencing primer

<400> 44

agctggcttg ttttgcttt

19

<210> 45

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: ABC1  
sequencing primer

<400> 45

tggacacgcc cagcttca

18

<210> 46

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: ABC1  
sequencing primer

<400> 46

cctgccatgc cacacaca

18

<210> 47

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: ABC1  
sequencing primer

<400> 47

ctcatcaccc gcagaaag

18

<210> 48

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: ABC1  
sequencing primer

<400> 48

cacactccat gaagcgag

18

<210> 49

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: ABC1  
sequencing primer

<400> 49

tccagataat gcgggaaa

18

<210> 50

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: ABC1  
sequencing primer

<400> 50

tcaggattgg cttcagga

18

<210> 51

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: ABC1  
sequencing primer

<400> 51  
aagtttgagc tggatttctt g 21

<210> 52  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: beta-globin  
antisense oligonucleotide

<400> 52  
cctcttacct cagttacaat ttata 25

<210> 53  
<211> 26  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: ABC1 antisense  
oligonucleotide

<400> 53  
catgttggtc ataggggtggg tagctc 26

<210> 54  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: beta-actin  
amplification primer

<400> 54  
tcacccacac tgtgccatct acga 24

<210> 55  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>

21

<223> Description of Artificial Sequence: beta-actin  
amplification primer

<400> 55  
cagcggaacc gctcattgcc aatgg

25

<210> 56

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: sterol  
response element oligonucleotide

<400> 56  
tcgagtgacc gatagtaacc tctcga

26

<210> 57

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: mutated sterol  
response element oligonucleotide

<400> 57  
tcgagctgca catagtaacc tctcga

26

*Sub  
B7  
cont*